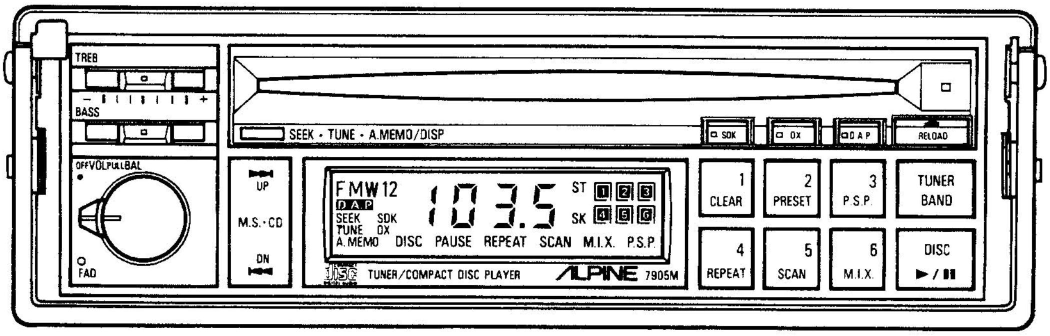
ALPINE

SERVICE MANUAL

Digital Tuner Compact Disc Player


TREB
BASS
SEEK · TUNE · A.MEMO/DISP
SDK
DX
D.A.P
RELOAD
OFF VOL PULL BAL
FAD
UP
M.S.·CD
DN
F MW 12
D.A.P
SEEK
TUNE
A.MEMO
SDK
DX
103.5
ST
SK
DISC
PAUSE
REPEAT
SCAN
M.I.X.
P.S.P.
TUNER/COMPACT DISC PLAYER
ALPINE
7905M
1 CLEAR
2 PRESET
3 P.S.P.
TUNER BAND
4 REPEAT
5 SCAN
6 M.I.X.
DISC ►/❚❚

7905M

※ For the CD mechanism of this model refer to the Service Manual 5905 (Part No. 68P10515W02).

7905M/7905E

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Specifications

CD SECTION

System	Optical (Compact Disc System)
Quantizing Bit Number	16 Bit Linear System
Channels	2 Channels
Distortion (1kHz)	0.015%
Frequency Response (1kHz)	20Hz : ±4dB 100Hz~10kHz : ±1dB 20kHz : ±2dB
S/N Ratio	80dB
Separation	60dB (1kHz)
Noise Level	0.1mV
Currents (at play)	1.2A
Tone Control Effect	Bass : 100Hz ±12dB±3dB Treble : 10kHz ±12dB±3dB

FM SECTION

Intermediate Frequency	10.7±0.1MHz
Frequency Range	87.5~108MHz
Usable Sensitivity (Stereo THD 3%)	17.2dBf
30dB S/N Quieting Sensitivity (Mono. 98.1MHz)	17.2dBf
Signal to Noise Ratio (Stereo 98.1MHz)	40dB
Image Rejection (106MHz)	40dB
IF Rejection (90MHz)	60dB
Distortion (Input 1mV, 98MHz)	1%
Frequency Response (400Hz)	100Hz : 0±3dB 10kHz : −12±3dB
Stereo Separation (1,000Hz)	25dB
SDK Sensitivity (98.1MHz)	25.2dBf

AM SECTION (7905E Only)

Intermeciate Frequency	450kHz
Frequency Range	531～1,602kHz
Sensitivity (20dB S/N, 999kHz)	45.2dBf
Signal to Noise Ratio (999kHz)	44dB
Image Rejection (1,404kHz)	50dB
IF Rejection (603kHz)	60dB
Distortion (999kHz)	2%
Frequency Response (400Hz)	100Hz : −3±4dB 4kHz : −12±6dB

MW SECTION (7905M Only)

Intermediate Frequency	450±5kHz
Frequency Range	531～1,602kHz
Sensitivity (20dB S/N, 999kHz)	45.2dBf
Signal to Noise Ratio (999kHz)	44dB
Image Rejection (1,404kHz)	45dB
IF Rejection (603kHz)	60dB
Distortion (999kHz)	1%
Frequency Response (400Hz)	100Hz : −3±3dB 4kHz : −12±6dB

LW SECTION (7905M Only)

Intermediate Frequency	450±5kHz
Frequency Range	153～281kHz
Sensitivity (20dB S/N, 218kHz)	52.2dBf
Signal to Noise Ratio (218kHz)	40dB
Image Rejection (272kHz)	40dB
IF Rejection (218kHz)	50dB
Distortion (218kHz)	2%
Frequency Resopnse (400Hz)	100Hz : −3±3dB 4kHz : −12±6dB

GENERAL

Power Supply	14V DC (10.5V to 16V allowable)
Output Voltage/Impedance	500mV/10k ohm
Semiconductors	32 IC's, 59 Transistors, 38 Diodes, 15 Zener Diodes (7905M Only) 29 IC's, 52 Transistors, 34 Diodes, 14 Zener Diodes (7905E Only)
Dimensions	Nose : 171 (W) ×48 (H) ×15 (D) mm Chassis : 178 (W) ×50 (H) ×155 (D) mm
Weight	1.6kg

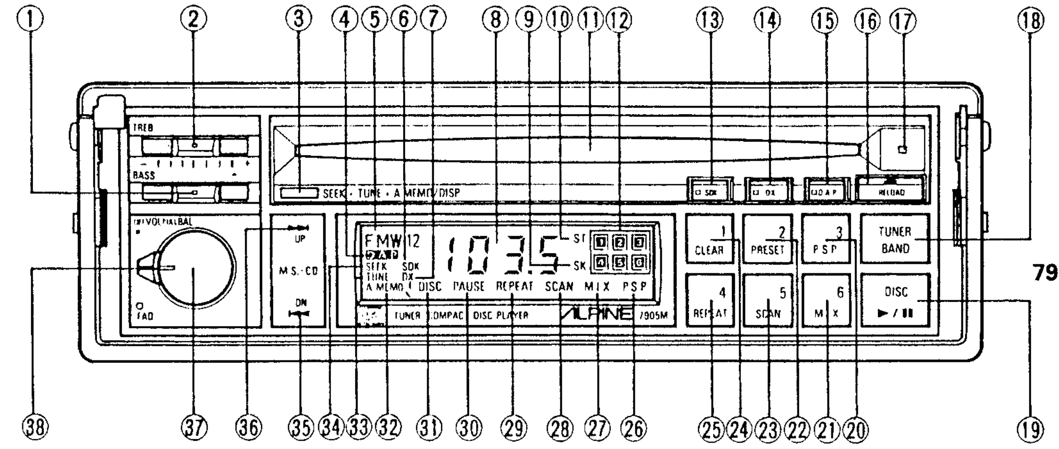
COMPACT DISC (Common)

Track Pitch	1.6 μm
Modulation Frequency	44.1kHz
Transfer Rate	4.3218Mbit/sec
Dimensions	120×1.2mm

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

Note : 7905M : West Germany model only
7905E : General European model only
Others : Common.

CONTROLS & INDICATORS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TREB
BASS
VOL/BAL
FAD
UP
M.S.·CD
DN
SEEK · TUNE · A MEMO/DISP
FMW 12
D.A.P
SEEK
TUNE
A MEMO
SDK
DX
103.5
ST
SK
DISC
PAUSE
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TUNER COMPACT DISC PLAYER
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DISC ►/❚❚
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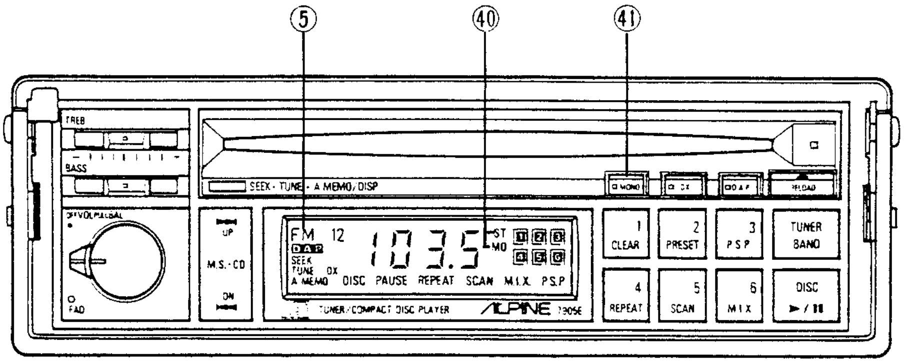
7905M model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TREB
BASS
VOL/BAL
FAD
UP
M.S.·CD
DN
SEEK · TUNE · A MEMO/DISP
FM 12
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DISC ►/❚❚

7905E model

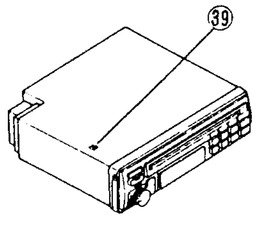
① BASS Control
② TREBLE Control
③ SEEK/TUNE/A. MEMO/DISP Switch

④ D.A.P. (Direct Access Preset) Indicator
⑤ TUNER BAND Indicator
⑥ SDK Indicator (7905M model only)
⑦ DX (Distance) Indicator
⑧ Digital Display
⑨ SK Indicator (7905M model only)
⑩ STereo Indicator
⑪ Disc Slot
⑫ Preset Address Indicators

⑬ SDK Switch (7905M model only)
⑭ DX (Local distance) Switch
⑮ D.A.P. (Direct Access Preset) Switch
⑯ RELOAD (EJECT) Switch
⑰ Reset Switch
⑱ TUNER BAND Switch
⑲ DISC (PLAY/PAUSE) Switch
⑳ ~ ㉕ Station Preset Switches $\boxed{1}$ ~ $\boxed{6}$
⑳ P.S.P. (Preset Play) Switch
㉑ M.I.X. Switch
㉒ PRESET Switch
㉓ SCAN Switch
㉔ CLEAR Switch
㉕ REPEAT Switch

㉖ P.S.P. (Preset Play) Indicator
㉗ M.I.X. Indicator
㉘ SCAN Indicator
㉙ REPEAT Indicator
㉚ PAUSE Indicator
㉛ DISC Indicator
㉜ Auto MEMOry Indicator
㉝ TUNE Indicator
㉞ SEEK Indicator

㉟ M.S. DowN (⏮) Switch
㊱ M.S. UP (⏭) Switch
㊲ Power Switch/Volume Control/Balance Control (Pull)
㊳ FADER Control
㊴ TONE BYPASS Switch (Top of Unit)
㊵ Stereo, MOnaural Indicators (7905E model only)
㊶ MONO Switch (7905E model only)



OPERATION

BASIC OPERATION

System initiation

When operating for the very first time after installation or replacement of the car battery, press the Reset Switch ⑰ with a ball-point pen or other pointed object.

Power Switching and Volume Control ㊲

Rotating the Power Switch ㊲ clockwise turns power ON and continuously increases the volume. Rotating the control counter-clockwise will continuously decrease the volume, and turn the Power Off.

NOTE: The noise level on compact discs is much lower than on analog-type records or tapes; therefore, when inserting a disc, keep the volume control turned fully counterclockwise, then adjust volume by gradually turning the control clockwise once playback begins. Do not turn clockwise too abruptly as this could damage the speakers.

Balance Control ㊲

Pull the Volume Control and rotate to balance between left and right speakers.

Fader Control ㊳

Rotate the Fader Control ㊳ for your desired front to rear volume balance.

Separate Bass and Treble Controls (①, ②)

Slide these controls to the right to increase, and to the left to decrease the level of Bass or Treble.

Note: Bass and Treble Controls do not function when the Tone By-Pass Switch (on top of the unit) is in the ON position.

RADIO OPERATION (7905M model only)

To hear radio broadcasts, the unit should be in radio mode. In the radio mode, the band indicator ⑤ will display either FM MW or LW.

● Manual TUNING

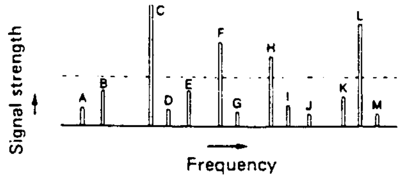
1. Press the Tune Switch ③. The TUNE indicator ㉝ in the display will illuminate.
2. To tune to higher frequencies, press the M.S. CD switch on the top (UP) ㊱.
3. To tune to lower frequencies, press this same switch on the bottom (DowN) ㉟.
4. To select a tuning band, press the TUNER BAND Switch ⑱. The band indicator ⑤ in the display will illuminate.

● Auto SEEK Tuning

1 Press the SEEK switch ③ and the SEEK indicator ㉞ in the display will illuminate.

2 Select the tuning band with the TUNER BAND Switch ⑱.

3 Before beginning to tune, select the Local or Distance Mode with the DX Switch ⑭. While Auto Seek tuning in Local Mode, only the strong signal stations will be tuned in and the weak ones will be passed by. In the distance mode, DX ⑦ will show in the display and all stations, both weak and strong, will be tuned in.



4. Press the UP ㊱ or DowN ㉟ switch, then it automatically tunes to the next higher frequency or lower frequency station and locks on that station.

● Manual Memory Preset

Follow the instructions below to memorize stations for preset tuning.

1 Select the tuning band (FM1, FM2, MW or LW) ⑤ with the TUNER BAND switch ⑱.

2 Tune in your desired station by manual tuning or Auto SEEK tuning.

3 Press any Preset Switch ⑳ — ㉕ for more than two seconds. The Address indicator ⑫ in the display will begin to blink. Press that switch a second time while the indicator is blinking, for five seconds.

4 The preset number will be memorized and will then show in the display ⑫.

Note: If a preset memory has already been set in the same address, it will be cleared and the new station will be memorized.

● Auto MEMOry Preset

1. Press the Auto MEMO switch ③ and light up the Auto MEMO indicator ㉜.
2. Select the desired tuning band (FM1, FM2 MW or LW) ⑤ with the TUNER BAND switch ⑱.
3. Press the seek UP ㊱ or DowN ㉟ switch.
   It will automatically seek 6 strong stations in each band and memory the stations in order of the signal strength from the strongest station for the Address No. 1 to the 6th strong station for the Address No. 6. When the station is memorized, the address indicator (No. 1 — 6) ⑫ will appear. First, it seekes the stations in the local tuning. If the stations memorized are less than 6, it seekes the stations in the distance (DX) tuning.
4. After finishing Auto Memory Preset, it tunes in the station memorized onto the Address No. 1. If no station is memorized, it returnes to the original station you were listening to before the auto memory preset procedures.

● Preset Tuning

After the preset stations have been memorized, you can tune in your desired station with just a touch of a switch.

1 Select the tuning band (FM1, FM2, MW or LW) ⑤ with the TUNER BAND Switch ⑱.

2 Press any one of the address switches ⑳ — ㉕ and the number 1 — 6 will illuminate in the display ⑫.

● D.A.P. (Direct Access Preset)

This feature allows the storage of FM, MW and LW presets on the same band.

To memorize stations into D.A.P., follow the same procedures as in Manual Memory Preset, above.

● To access the D.A.P. presets:

1. Press the D.A.P. Switch ⑮. The D.A.P. indicator ④ will illuminate in the display.
2. Press any one of the address switches and the number 1 — 6 will illuminate in the display.

Traffic Information Receiving

This model is equipped with traffic information receiving apparatus to be used in West Germany where the traffic information is broadcast in FM. The following is how to use this unit to receive traffic information broadcasting.

1. Select FM position.

2. Depress the SDK switch ⑬ and tune to a station. If the station is a traffic information station, the SK indicator ⑨ will glow and show the reception of a broadcast from a traffic information station.
   NOTE: SK Indicator
   When SK signal is received irrespective of the SDK position, the SK indicator will illuminate.
3. In the SDK mode, stations other than traffic information stations are muted and cut out. Therefore, it is easy to select a traffic information station.
4. As the signal of the tuned traffic information station becomes weak, the SK indicator will extinguish, and after 10 seconds the radio will be muted. Then after the lapse of 25 seconds, a rhythmical alarm will sound to urge retuning to another stronger station. If the reception of further traffic information is required, tune in the desired traffic information station. When received, the alarm will stop and the SK indicator illuminates. Since the alarm will continue if no signals from any other traffic stations can be received, release SDK switch for the reception of normal broadcasting.
5. When the unit is playing CD with the SDK switch pushed in and tuned to a traffic information station, the CD play is interrupted and changed to FM radio if the pre-tuned station begins a traffic information message. When the message is over, the unit reverts to CD play automatically.
6. Even if the VOLUME control is set to the minimum position, the volume of the traffic information will be automatically adjusted to proper level. After the message, the sound volume returns to the previously adjusted level.
7. If traffic information reception is no longer necessary, release SDK switch for normal radio reception.

NOTE: When the SDK switch is pressed and there is no ARI signal for 10 seconds, the radio will be muted, and after the lapse of 25 seconds ALARM will sound. Press the SDK switch again to stop it.

RADIO OPERATION (7905E model only)

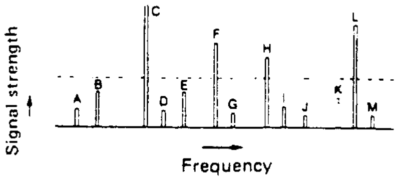
To hear radio broadcasts, the unit should be in radio mode. In the radio mode, the band indicator ⑤ will display either FM or AM.

● Manual TUNING

1. Press the Tune Switch ⑧. The TUNE indicator ㉝ in the display will illuminate.
2. To select a tuning band, press the TUNER BAND Switch ⑱. The band indicator ⑤ in the display will illuminate.
3. To tune to higher frequencies, press the M.S. CD switch on the top (UP) ㊱.
4. To tune to lower frequencies, press this same switch on the bottom (DowN) ㉟.

● Auto SEEK Tuning

1 Press the SEEK switch ③ and the SEEK indicator ㉞ in the display will illuminate.
2 Select the tuning band with the TUNER BAND Switch ⑱.
3 Before beginning to tune, select the Local or Distance Mode with the DX Switch ⑭. While Auto Seek tuning in Local Mode, only the strong signal stations will be tuned in and the weak ones will be passed by. In the distance mode, DX ⑦ will show in the display and all stations, both weak and strong, will be tuned in.



4. Press the UP ⏭ or DowN ⏮ switch, then it automatically tunes to the next higher frequency or lower frequency station and locks on that station.

● Manual Memory Preset

Follow the instructions below to memorize stations for preset tuning.

1. Select the tuning band (FM1, FM2 or AM) ⑤ with the TUNER BAND switch ⑱.
2. Tune in your desired station by manual tuning or Auto SEEK tuning.
3. Press any Preset Switch ⑳ — ㉕ for more than two seconds. The Address indicator ⑫ in the display will begin to blink. Press that switch a second time while the indicator is blinking, for five seconds.
4. The preset number will be memorized and will then show in the display ⑫.
   Note: If a preset memory has already been set in the same address, it will be cleared and the new station will be memorized.

● Auto MEMOry Preset

1. Press the Auto MEMO switch ③ and light up the Auto MEMO indicator ㉜.
2. Select the desired tuning band (FM1, FM2 or AM) ⑤ with the TUNER BAND switch ⑱.
3. Press the seek UP ㊱ or DowN ㉟ switch.
   It will automatically seek 6 strong stations in each band and memory the stations in order of the signal strength from the strongest station for the Address No. 1 to the 6th strong station for the Address No. 6. When the station is memorized, the address indicator (No. 1 — 6) ⑫ will appear. First, it seekes the stations in the local tuning. If the stations memorized are less than 6, it seekes the stations in the distance (DX) tuning.
4. After finishing Auto Memory Preset, it tunes in the station memorized onto the Address No. 1. If no station is memorized, it returnes to the original station you were listening to before the auto memory preset procedures.

● Preset Tuning

After the preset stations have been memorized, you can tune in your desired station with just a touch of a switch.

1 Select the tuning band (FM1, FM2 or AM) ⑤ with the TUNER BAND Switch ⑱.
2 Press any one of the address switches ⑳ — ㉕ and the number 1 — 6 will illuminate in the display ⑫.

● D.A.P. (Direct Access Preset)

This feature allows the storage of AM, and FM presets on the same band.

To memorize stations into D.A.P., follow the same procedures as in Manual Memory Preset, above.

● To access the D.A.P. presets:

1. Press the D.A.P. Switch ⑮. The D.A.P. indicator ④ will illuminate in the display.
2. Press any one of the address switches and the number 1 — 6 will illuminate in the display.

● MONO Switch

While FM tuning, you can select Stereo Tuning, or Monaural tuning with the MONO Switch ㊶. MONO may be used to quiet the noisy signal of weaker broadcasts. When selected, the indicator ㊵ in the display will show either MONO for Monoaural or ST for Stereo.

CD OPERATION

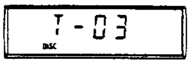
Cautions During Playback

- Playing a disc while driving on a very bumpy road may result in skips but this will not scratch the disc or damage the player.

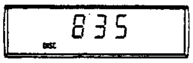
Notes:
1. Your player accepts only one disc at a time for playback. Do not attempt to load more than one disc.
2. Make sure the label side is facing up, when you insert the disc. Your player will automatically eject any disc that is inserted incorrectly. If the player continues to eject a correctly inserted disc, push the reset switch ⑰ with a sharp object such as a ballpoint pen.
3. To play 3-inch CDs in this player, use Alpine adaptor ring. Other manufacturer's adaptor ring may get stuck inside and damage the player.
4. Make sure your discs are labeled as shown below:

COMPACT
disc
DIGITAL AUDIO

- **Load and Reload**
  1. Insert a disc into the slot ⑪.
     When the disc is halfway in, the power loading system will take over and guide the disc into play position.
  2. If the disc is left at least halfway in, press the RELOAD switch ⑯ or DISC switch ⑲.
  3. The digital display ⑧ shows " T-00 " for a second while the data on the disc is read.
  4. When a disc is loaded during radio reception, the CD mode will automatically switch on.
- **Track/Elapsed Time Display Switching**
  Press the Display Switch ③ for the Track Number being played and the Elapsed Time for the current track to be shown in the Digital Display. See below.

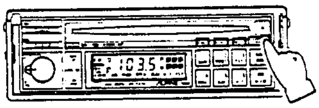


(Track Mode)



(Time Mode)

- **Eject**
  Press the RELOAD (EJECT) switch ⑯. The disc will come partially out. If the eject status is maintained more than 15 seconds, the self loading system will be automatically actuated and the disc will be reloaded into the mechanism and the player will be set to PAUSE mode.



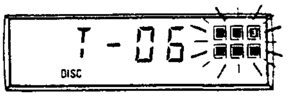
- **Normal Play (Repeat All)**
  1. Load the Disc.
  2. The digital display ⑧ will show " T-00 " for a second time, then " T-01 " will be displayed and the first track on the disc will begin playback.
  3. After the last track on the disc is played back, the pickup will return to the beginning of the disc and begin playback from that point.
- **Pause**
  Press the DISC switch ⑲ to hold playback temporarily. The PAUSE indicator ㉚ will be on and the playback stops, but the disc remains inside the player. To resume playback, press the DISC switch ⑲ again.
- **Music Sensor (Skip)**
  With this feature, you can get to the beginning of the music track of your choice simply and quickly. It is functional in the play or pause mode.
  The digital display ⑧ shows the pickup location with the Track Number.
- To advance to a track somewhere ahead on the disc, press the ⏭ side of the Music Sensor switch ㊱.
  1. Playback stops, the pickup moves up to the beginning of the next track ahead. The digital display ⑧ shows the number of the next track the pickup has just reached.
  2. Playback begins immediately.
  3. If you wish to reach and play another track further ahead on the disc, continue pressing the ⏭ side of the switch ㊱ until you reach the track of your choice.
- To replay the track that is currently playing, press the ⏮ side of the music sensor switch ㉟.
  1. Playback stops, the pickup moves back to the beginning of the current track. The track number display will remain the same.
  2. Playback begins immediately from the beginning of the track.
  3. If you wish to reach and play another track further behind on the disc, successive presses on the ⏮ side of the switch ㉟ will move the pickup back until you reach the track of your choice.
- **In Pre Set Play**
  If a track not originally preset is chosen for play back with the Music Sensor (㉟, ㊱) during Preset Playback operation, the preset play operation will resume after completion of that selection.
- **FAST FORWARD/FAST BACKWARD**
  The Fast Forward/Fast Backward feature works in both play and pause modes.
  1. Press either the MS UP ㊱ or MS DowN ㉟ switch for more than 2 seconds.
  2. To move the pickup forward rapidly, hold down the UP ⏭ switch ㊱.
  3. To move the pickup backward rapidly, hold down the DN ⏮ switch ㉟.
  4. When pickup reaches the end of the disc, it returns to the beginning automatically from the end, playback will start from the beginning of the disc.
- **REPEAT (One)**
  The repeat feature allows you to continuously play back a single track.
  1. Press the REPEAT switch ㉕.
  2. The music track shown in the display ⑧ will be played back repeatedly.
  3. To stop repeat playback, press the REPEAT switch a second time.
- **SCAN**
  This function allows playback of the first 10 seconds of each track in succession. This function is useful in searching for a specific program ahead on a disc. A second push of the SCAN switch ㉓ deactivates the function.
  The SCAN function also works in the Preset Play Mode. Push the SCAN switch ㉓ while in Preset Play. The first 10 seconds of the music tracks stored in the memory (up to 6) will be played back, in order, starting from the next Preset number. To stop Scan, press the SCAN switch ㉓ a second time.

- **Random Play (M.I.X.)**
  Depress the M.I.X. switch ㉑ while in play or pause mode. Music tracks will be played back in random sequence according to random number generated by the microprocessor. After all the tracks on the disc have been played back once, the player will begin a new random sequence.

- **Preset Procedures**
  - **Preset**
    1. The preset memory can be programmed whether the disc is inserted or not.

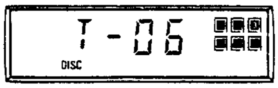
2. Press the P.S.P. switch ⑳ for more than 2 seconds. The preset address indicator frame ⑫ will blink.
3. Press the PRESET switch ㉒ to select a preset. The address number in the indicator frame will be on.
4. Select your desired music track with the UP ㊱ and DowN ㉟ switches. The track number is shown on the digital display.

   NOTE: Any track from 1 to 99 can be programmed (when the disc is not inserted) for preset play. However, if a track number higher than the actual number of selections on a disc is preset, that preset will automatically be cancelled when P.S.P. switch is pressed after the disc is inserted.



5. Press the PRESET switch ㉒. As shown in the illustration above, number 6 has been memorized in the number 3 frame. The preset number will automatically be advanced to the next higher frame after the preset switch is pressed.

- **Preset Memory Check**
  1. To find out which tracks were stored into memory, keep pressing the PRESET switch ㉒.
     The Address Number and Track Number will appear on the address indicator ⑫ and digital display ⑧ in order of Address Number.

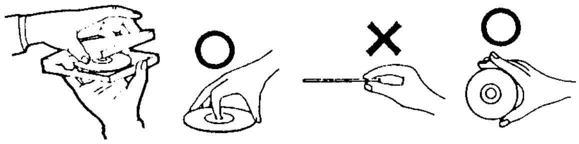


For example, the figure shows that the Track Number 6 is addressed at 3.

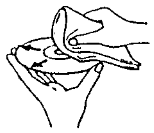
- **Preset Play**
  To start Preset Play, Preset memory should have already been programmed. Refer to Preset procedure section.
  1. Load a disc.
  2. Press the P.S.P switch ⑳.
  3. The playback will start from the track addressed at 1, 1 will appear on the preset address indicator ⑫ and the Track Number programmed at 1 show on the digital display ⑧, and continue in order of Address Number to the last programmed number, up to 6.
  4. After the last addressed track is played back, the pickup will return to the track programmed at 1 and begin playback again.
  5. If the P.S.P. switch is pressed while Preset Play, Preset Play changes to Normal Play.
- **Preset Memory Clear**
  - **All Clear**
    1. Press the P.S.P. switch ⑳ for more than 2 sec.
    2. Push the Clear Switch ㉔ for more than 2 sec.
  - **One Program Clear**
    1. Press the P.S.P. switch ⑳ for more than 2 sec.
    2. Push the Preset Switch of your choice.
    3. Push the Clear Switch ㉔. (**Caution:** If pushed for more than 2 sec. all presets will be cleared.)
    4. The content in the preset No. will be cleared.
    5. To program another selection into this preset, follow the preset procedures above.

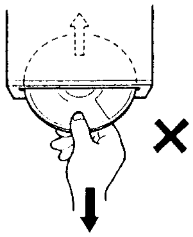
PROPER CARE OF YOUR DISC

- **Proper Handling**
  Handle your disc as shown. Do not drop the disc while handling. Hold the disc so you will not leave fingerprints on the surface. If the surface is scratched, it may cause the pickup to skip signal tracks. Do not affix tape, paper, or gummed labels on the disc. Do not write on the disc.

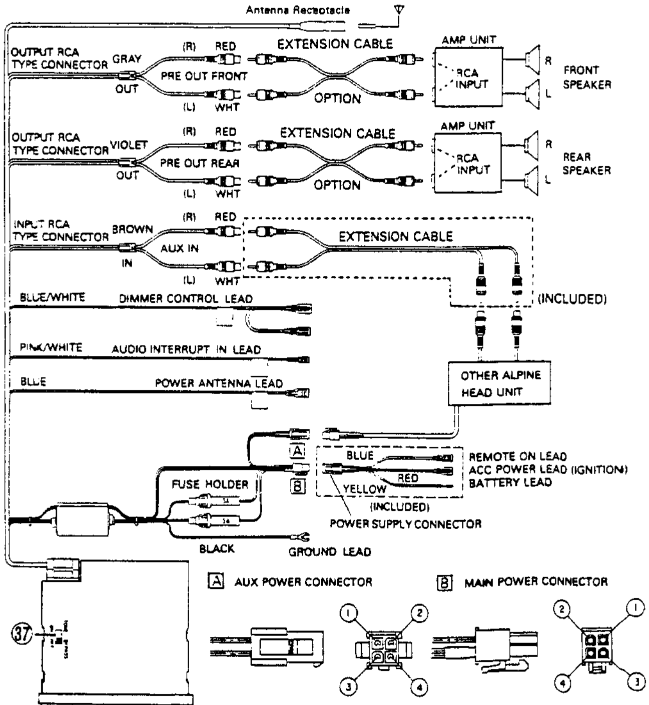


- **Keep Your Discs Clean**
  Fingerprints, dust, or soil on the surface could cause the pickup to skip signal tracks. Wipe the surface clean with a clean soft cloth. If the surface is heavily soiled, dampen a clean soft cloth in a solution of mild neutral detergent to wipe it clean. See drawing.
- **Damaged Disc**
  Do not attempt to play damaged, warped or cracked discs. It could severely damage the playback mechanism.
- **Storage**
  When not in use, place your discs in their individual case and store them in a cool place away from the sun, heat, and dust.
- Do not grip or pull out the disc with your hand while the disc is being pulled into the unit by Self Loading mechanism.
- Do not put the unit out from the Quick Release Bracket immediately after disc insertion into the unit or pressing the EJECT switch.
  If the unit is pulled out when the disc is unstable in the unit, it can be scratched by moving the unit.
- Do not insert a disc into the unit when the unit is pulled out from the Quick Release Bracket or the power is turned off.





CONNECTIONS


Antenna Receptacle
OUTPUT RCA TYPE CONNECTOR
GRAY
OUT
(R) RED
PRE OUT FRONT
(L) WHT
EXTENSION CABLE
OPTION
AMP UNIT
RCA INPUT
R
L
FRONT SPEAKER
OUTPUT RCA TYPE CONNECTOR
VIOLET
OUT
(R) RED
PRE OUT REAR
(L) WHT
EXTENSION CABLE
OPTION
AMP UNIT
RCA INPUT
R
L
REAR SPEAKER
INPUT RCA TYPE CONNECTOR
BROWN
IN
(R) RED
AUX IN
(L) WHT
EXTENSION CABLE
(INCLUDED)
BLUE/WHITE
DIMMER CONTROL LEAD
PINK/WHITE
AUDIO INTERRUPT IN LEAD
BLUE
POWER ANTENNA LEAD
OTHER ALPINE HEAD UNIT
A
B
BLUE
RED
YELLOW
REMOTE ON LEAD
ACC POWER LEAD (IGNITION)
BATTERY LEAD
(INCLUDED)
POWER SUPPLY CONNECTOR
FUSE HOLDER
BLACK
GROUND LEAD
㊲
A AUX POWER CONNECTOR
B MAIN POWER CONNECTOR
①
②
③
④

①	IN REMOTE
②	OUT PAUSE
③	BATTERY
④	IGNITION

①	REMOTE ON
②	IN PAUSE
③	BATTERY
④	IGNITION

Disassembly Instructions

<Cabinet Section>

1. Removal of Nosepiece

(1) After removal of the top cover and bottom plate, remove two control knobs (Volume and Fader) and two slide knobs as shown in Figure 2.

(2) Remove two screws marked "○" and two hooks (A) as shown in Figure 1 and 2.

2. Removal of CD Deck

(1) After removal of Nosepiece, remove five screws marked "△" as shown in Figure 3.

(2) Disconnect a flat cable wire and wire from the Main P. C. Board.

3. Removal of Front P. C. Board

(1) After removal of CD Deck, remove the solder (B) and two screws marked "●" as shown in Figures 3, 4 and 5.

Note : Don't cut a flat cable wires as shown in Figure 4 by removing the solder (B).

(2) Disconnect a flat cable wire from the Audio P. C. Board.

4. Removal of Audio P. C. Board

(1) After removal of the Front P. C. Board, remove one nut as shown in Figure 5.

(2) Disconnect the Audio P. C. Board from the Main P. C. Board connectors, and the Audio P. C. Board can be removed.

5. Removal of Main P. C. Board

(1) After removing Front P. C. Board, remove the solder (c) as shown in Figure 4.

(2) Remove four screws marked "□" and two hooks (B) as shown in Figure 4.

(3) Disconnect all wires from the Main P. C. Board.

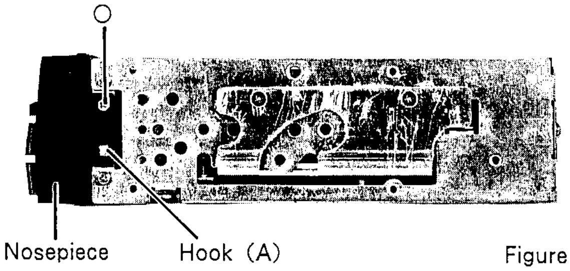

○
Nosepiece
Hook (A)

Figure 1

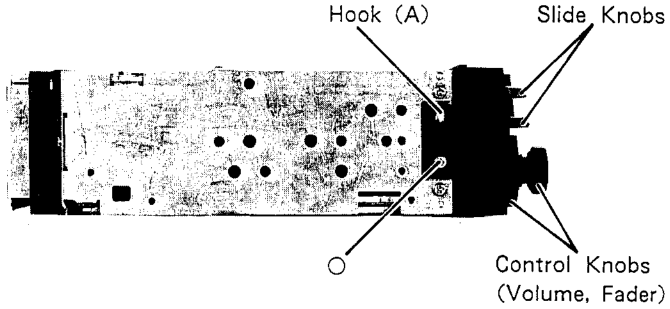

Hook (A)
Slide Knobs
○
Control Knobs
(Volume, Fader)

Figure 2

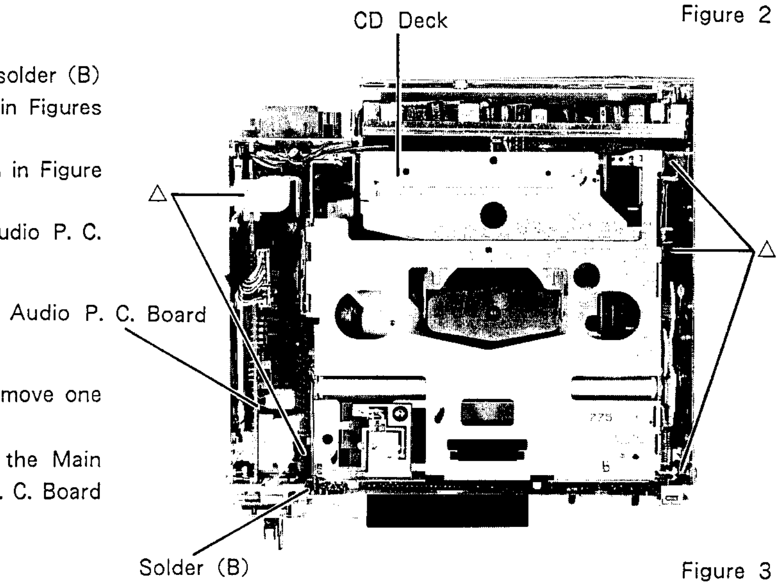

CD Deck
△
△
Audio P. C. Board
Solder (B)

Figure 3

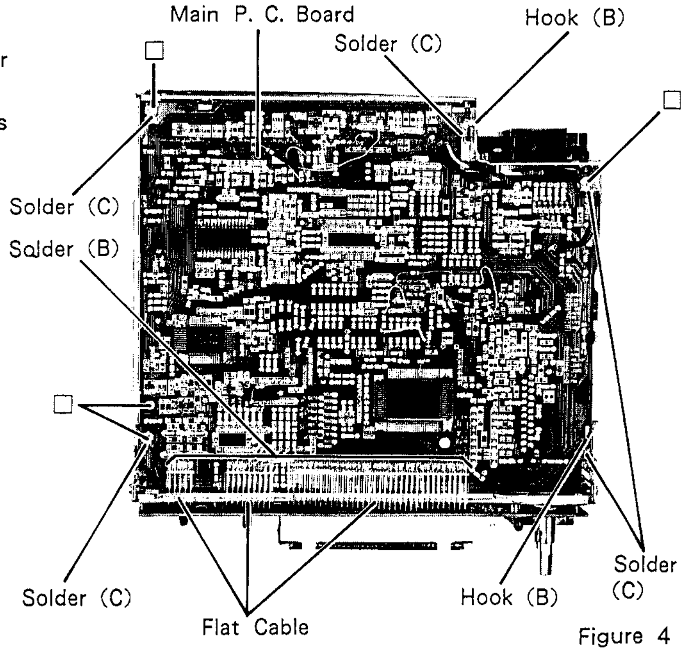

Main P. C. Board
Solder (C)
Hook (B)
□
□
Solder (C)
Solder (B)
□
Solder (C)
Flat Cable
Hook (B)
Solder
(C)

Figure 4

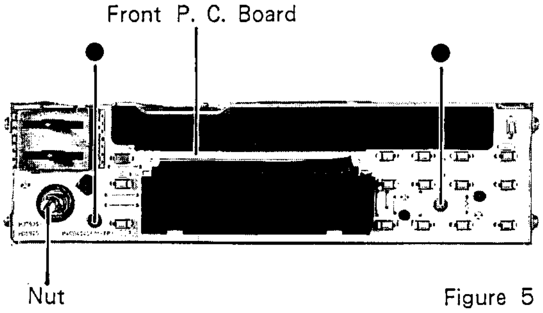

Front P. C. Board
●
●
Nut

Figure 5

Adjustment Procedures

1. Compact Disc

(1) Connections

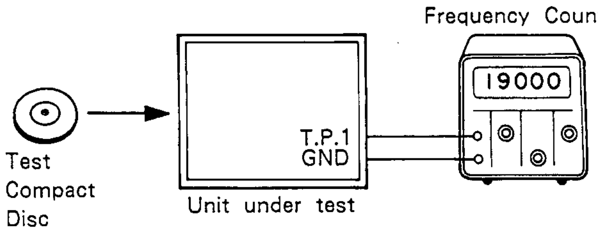

Frequency Counter
19000
Test
Compact
Disc
T.P.1
GND
Unit under test

Figure 6

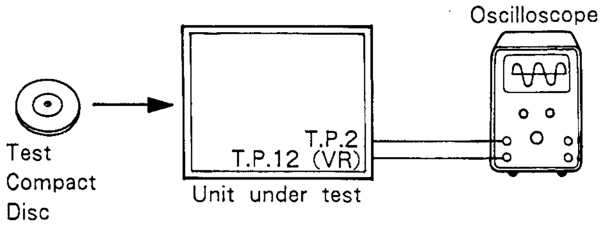
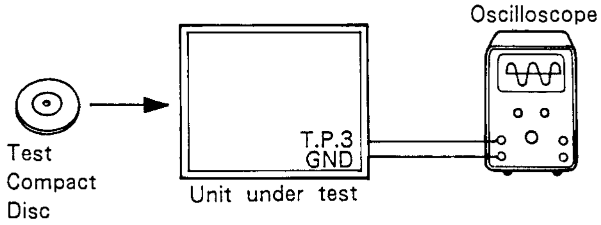

Oscilloscope
Test
Compact
Disc
T.P.2
T.P.12 (VR)
Unit under test

Figure 7


Oscilloscope
Test
Compact
Disc
T.P.3
GND
Unit under test

Figrue 8

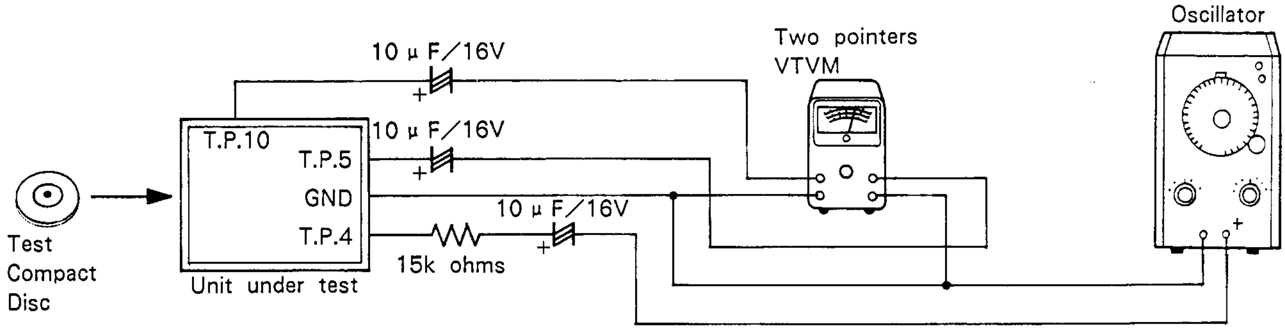

10 μ F/16V
10 μ F/16V
10 μ F/16V
Two pointers
VTVM
Oscillator
T.P.10
T.P.5
GND
T.P.4
15k ohms
Test
Compact
Disc
Unit under test

Figure 9

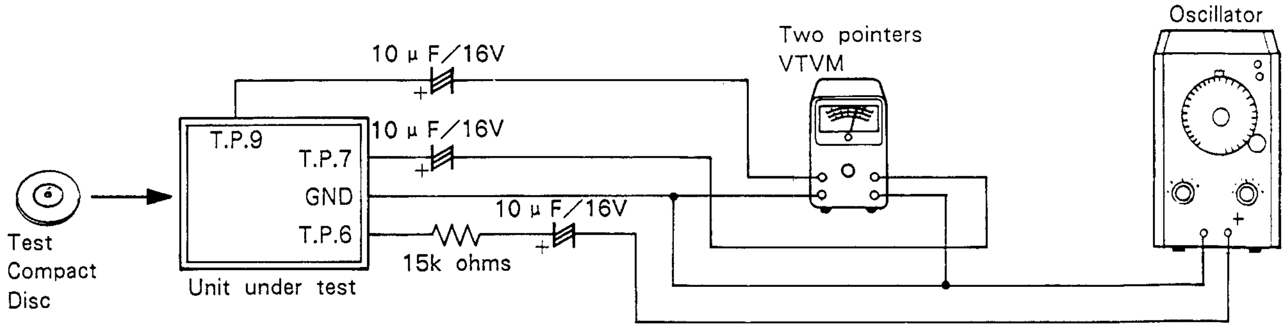
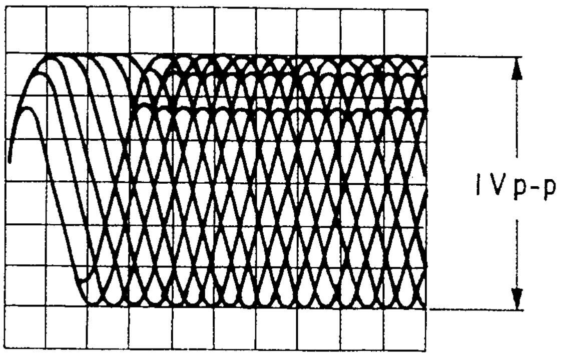
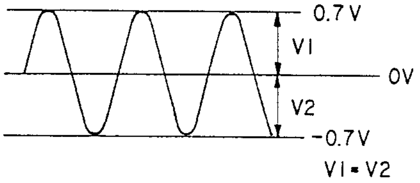

10 μ F/16V
10 μ F/16V
10 μ F/16V
Two pointers
VTVM
Oscillator
T.P.9
T.P.7
GND
T.P.6
15k ohms
Test
Compact
Disc
Unit under test

Figure 10

(2) Preliminary Works

- Test compact disc used : SONY YEDS-18
- Power supply voltage : DC 14V

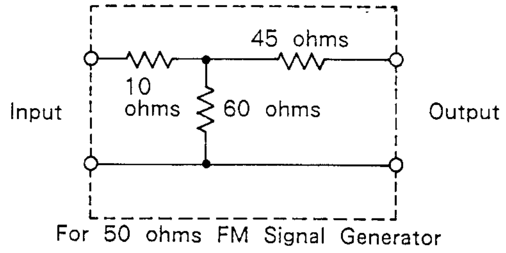
(2) Adjustment Procedures

Step	Description	Connection	Test Point	Adjustment
1	Focus Balance Adjustment	Figure 8	T.P.3	① Set the mode to playback with the test disc loaded. ② Adjust VR11 so that the maximum RF waveform and the best eye pattern are obtained. ※ "Best eye-pattern" means the lozenges at the center of waveform become distictly sharp. 
2	Tracking Balance Adjustment	Figure 7	T.P.2	① Set the mode to playback with the test disc loaded. ② In playback mode, short-circuit T.P.8 to T.P.12 (VR) and set the tracking servo to OFF. ③ Adjust VR14 so that the tracking error signal waveform is symmetrical with respect to 0V (VR).  ④ After adjustment, remove the wire connecting to T.P.8 and T.P.12 (VR).
3	Focus Gain Adjustment	Figure 9	T.P.4 (Oscillator) T.P.5 T.P.10	① Connect the oscillator to T.P.4 through the resistor 15k ohms and the electrolytic capacitor 10 μ F／16V in series. ② Connect the two-pointers VTVM to T.P.5 and T.P.10 through the electrolytic capacitor 10 μ F／16V respectively. ③ Set the mode to playback with the test disc loaded. ④ Set the oscillator output to 1kHz, 150mVp-p. ⑤ Adjust VR13 so that the level of T.P.10 against that of T.P.5 is +6dB±1dB by using the two-pointers VTVM. ⑥ After adjustment, remove the resistor and electrolytic capacitor.

Step	Description	Connection	Test Point	Adjustment
4	Tracking Gain Adjustment	Figure 10	T.P.6 (Oscillator) T.P.7 T.P.9	① Connect the oscillator to T.P.6 through the resistor 15k ohms and the electrolytic capacitor 10 μ F／16V in series. ② Connect the two-pointers VTVM to T.P.7 and T.P.9 through the electrolytic capacitor 10 μ F／16V respectively. ③ Set the mode to playback with the test disc loaded. ④ Set the oscillator output to 1kHz, 150mVp-p. ⑤ Adjust VR12 so that the level of T.P.9 against that of T.P.5 is +6dB±1dB by using the two-pointers VTVM. ⑥ After adjustment, remove the resistor and electrolytic capacitor.
5	VCO Adjustment	Figure 6	T.P.1	① Set the mode to playback with the test disc loaded. ② In playback mode, short-circuit T.P.11 to T.P.12 (VR) and set the VCO to free-run condition. ③ Adjust VR10 so that the frequency of T.P.1 is 4.32MHz±30kHz. ④ After adjustment, remove the wire connecting to T.P.11 and T.P.12 (VR).

SDK Section (7905 Model Only)

(1) Dummy Antenna


45 ohms
10 ohms
60 ohms
Input
Output
For 50 ohms FM Signal Generator

(2) Connections

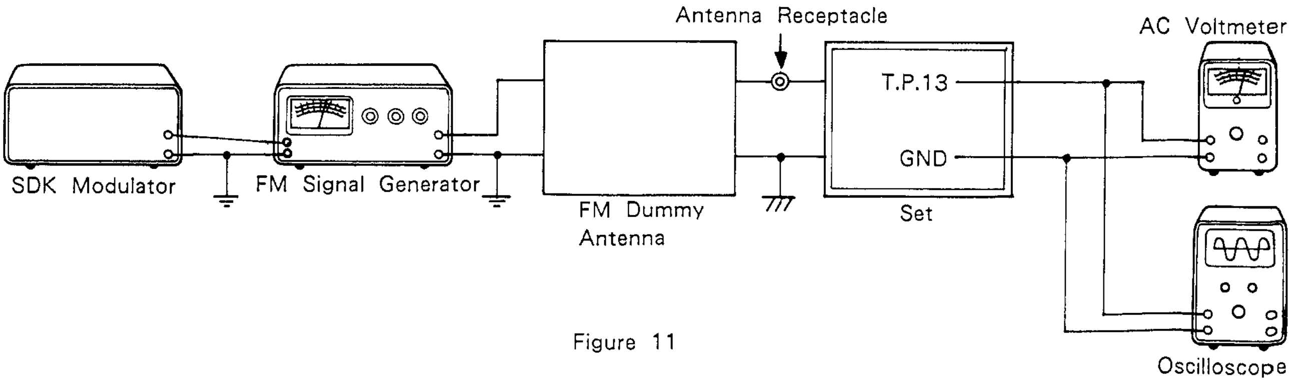
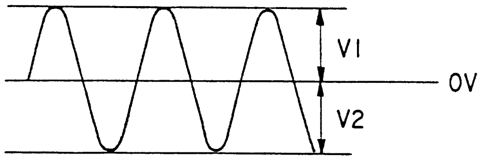
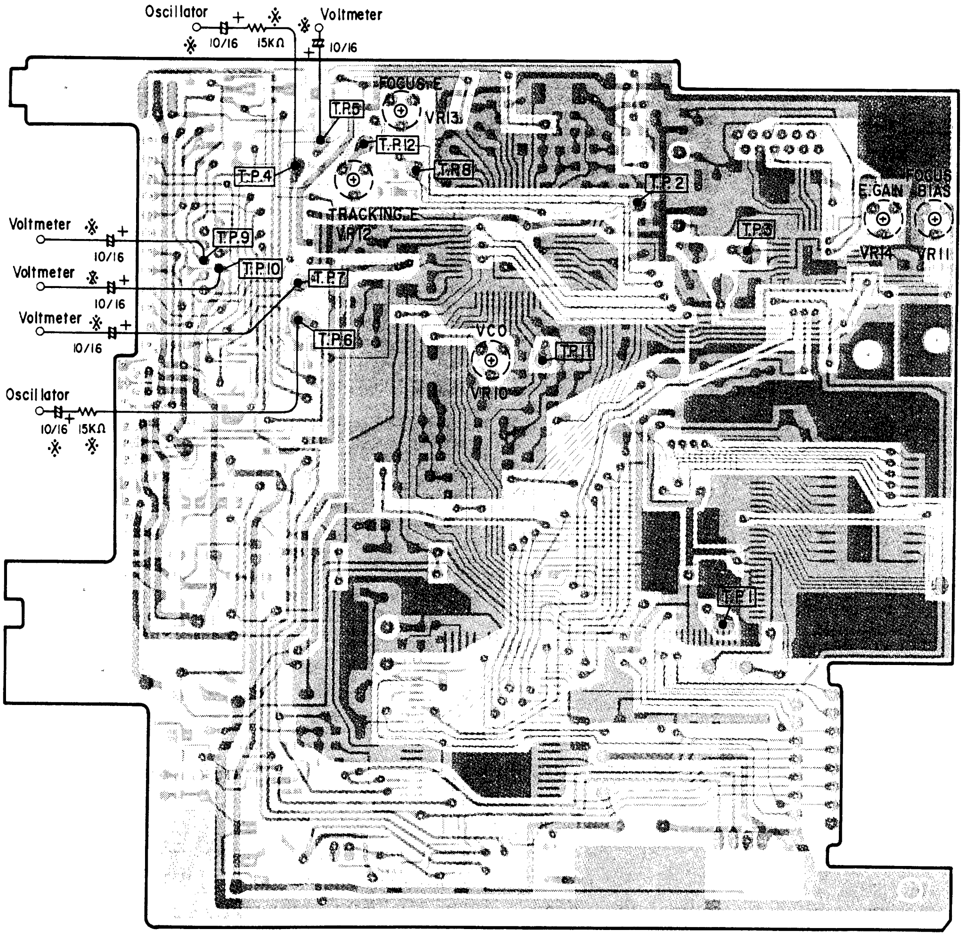

Antenna Receptacle
AC Voltmeter
T.P.13
GND
SDK Modulator
FM Signal Generator
FM Dummy Antenna
Set
Oscilloscope

Figure 11

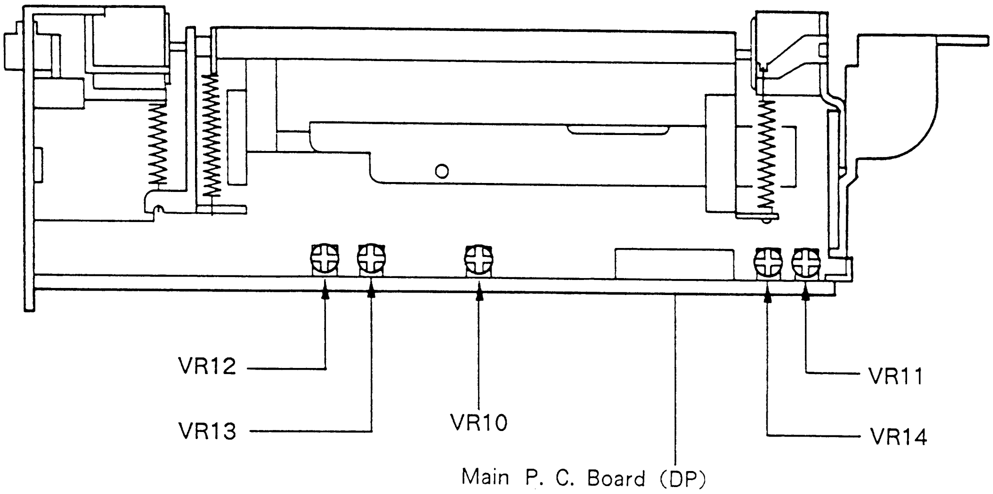
Step	Description	Connection	Test Point	Adjustment
1	DK Adjustment	Figure 11	T.P.13	① Set SDK Switch to ON. ② Set the unit frequency to 98.1MHz. ③ Set the output of the signal generator to 72dB, 98.1MHz. ④ Adjust VR101 so that DK output waveform at T.P.13 is maximum.  V1 = V2

Adjustment Locations

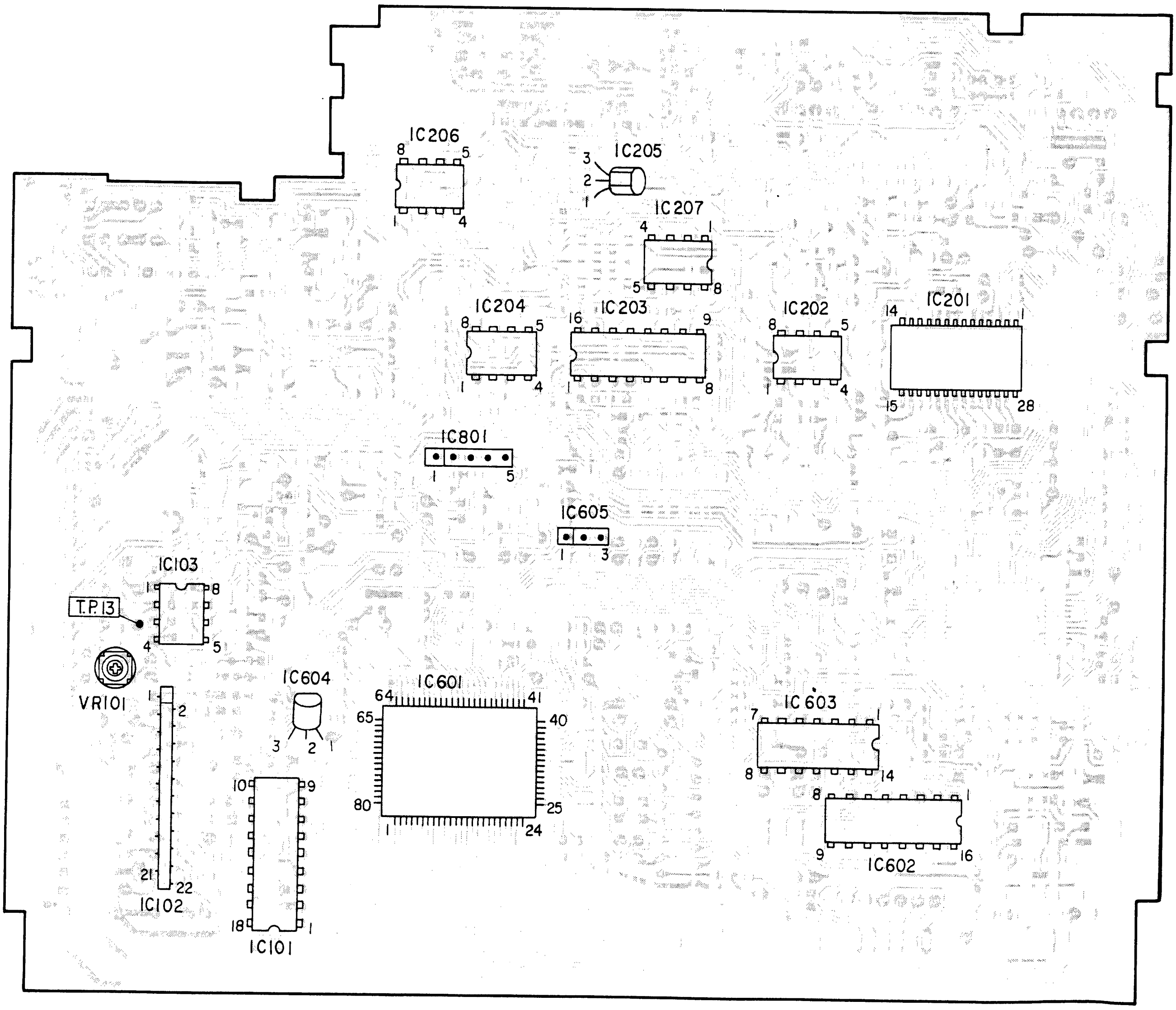


Oscillator
10/16
15KΩ
Voltmeter
10/16
FOCUS E
T.P.5
VR13
T.P.12
T.P.4
T.P.8
T.P.2
TRACKING E
VR12
T.P.9
T.P.10
T.P.7
T.P.6
T.P.3
FOCUS BIAS
E.GAIN
VR14
VR11
VCO
VR10
T.P.11
T.P.1
Voltmeter
10/16
Voltmeter
10/16
Voltmeter
10/16
Oscillator
10/16
15KΩ

Main P. C. Board (DP)
(Foil side View)


VR12
VR13
VR10
VR11
VR14
Main P. C. Board (DP)

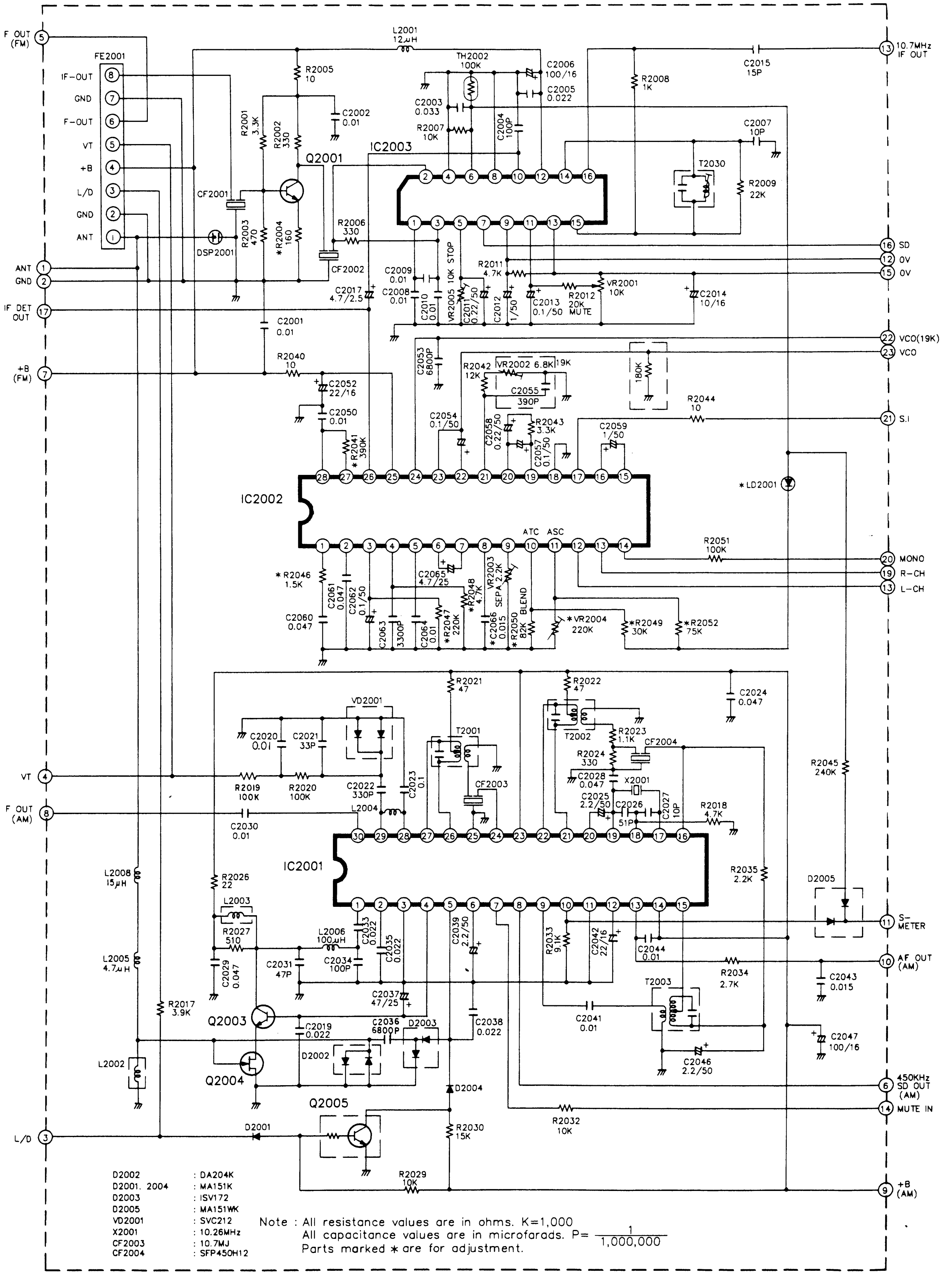
(7905M Models Only)


IC206
8
5
1
4
IC205
3
2
1
IC207
4
1
5
8
IC204
8
5
1
4
16
IC203
9
1
8
IC202
8
5
1
4
14
IC201
1
15
28
IC801
1
5
IC605
1
3
IC103
1
8
4
5
T.P.13
VR101
1
2
21
22
IC102
IC604
3
2
1
64
IC601
41
65
40
80
25
1
24
10
9
18
1
IC101
IC603
7
1
8
14
8
1
9
16
IC602

Main P. C. Board

Tuner Schematic Diagram

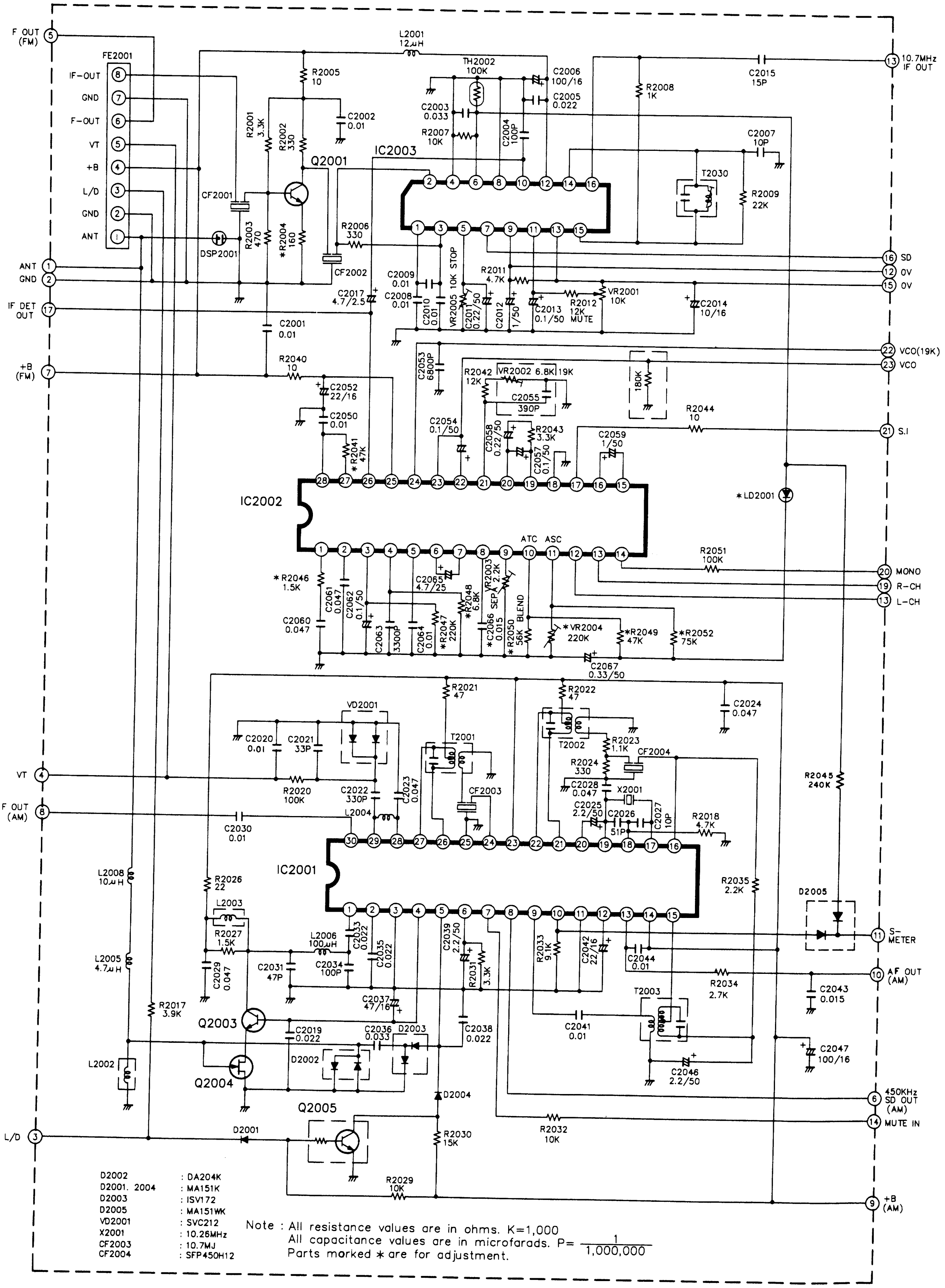
(7905M Model Only)


F OUT (FM) 5
FE2001
IF-OUT 8
GND 7
F-OUT 6
VT 5
+B 4
L/D 3
GND 2
ANT 1
ANT 1
GND 2
IF DET OUT 17
+B (FM) 7
VT 4
F OUT (AM) 8
L/D 3
10.7MHz IF OUT 13
SD 16
0V 12
0V 15
VCO(19K) 22
VCO 23
S.I 21
MONO 20
R-CH 19
L-CH 13
S-METER 11
AF OUT (AM) 10
450KHz SD OUT (AM) 6
MUTE IN 14
+B (AM) 9
IC2003
IC2002
IC2001
Q2001
Q2003
Q2004
Q2005
L2001 12μH
TH2002 100K
R2005 10
R2008 1K
C2015 15P
C2006 100/16
C2005 0.022
C2003 0.033
C2002 0.01
R2007 10K
C2004 100P
C2007 10P
T2030
R2009 22K
CF2001
CF2002
DSP2001
R2001 3.3K
R2002 330
R2003 470
*R2004 160
R2006 330
C2009 0.01
C2008 0.01
C2017 4.7/2.5
10K STOP
R2011 4.7K
VR2001 10K
R2012 20K
C2013 0.1/50 MUTE
C2014 10/16
C2001 0.01
R2040 10
C2052 22/16
C2050 0.01
*R2041 390K
C2053 6800P
R2042 12K
VR2002 6.8K
19K
C2055 390P
180K
R2044 10
C2054 0.1/50
C2058 0.22/50
R2043 3.3K
C2057 0.1/50
C2059 1/50
*LD2001
ATC
ASC
R2051 100K
*R2046 1.5K
C2060 0.047
C2061 0.047
C2062 0.1/50
C2063 3300P
C2064 0.01
C2065 4.7/25
*R2047 220K
*R2048 4.7K
VR2003 SEPA 2.2K
*C2066 0.015
*R2050 82K
BLEND
*VR2004 220K
*R2049 30K
*R2052 75K
R2021 47
R2022 47
C2024 0.047
VD2001
T2001
T2002
R2023 1.1K
CF2004
R2024 330
C2028 0.047
X2001
C2025 2.2/50
C2026 51P
C2027 10P
R2018 4.7K
R2045 240K
C2020 0.01
C2021 33P
R2019 100K
R2020 100K
C2022 330P
C2023 0.1
CF2003
L2004
C2030 0.01
L2008 15μH
R2026 22
L2003
R2027 510
L2006 100μH
C2033 0.022
C2035 0.022
C2039 2.2/50
R2033 9.1K
C2042 22/16
C2044 0.01
R2034 2.7K
R2035 2.2K
D2005
C2043 0.015
L2005 4.7μH
C2029 0.047
C2031 47P
C2034 100P
C2037 47/25
T2003
R2017 3.9K
C2019 0.022
C2036 6800P
D2003
C2038 0.022
C2041 0.01
C2047 100/16
C2046 2.2/50
L2002
D2002
D2004
R2032 10K
D2001
R2030 15K
R2029 10K

D2002 : DA204K
D2001, 2004 : MA151K
D2003 : ISV172
D2005 : MA151WK
VD2001 : SVC212
X2001 : 10.26MHz
CF2003 : 10.7MJ
CF2004 : SFP450H12

Note : All resistance values are in ohms. K=1,000
All capacitance values are in microfarads. P= $\frac{1}{1,000,000}$
Parts marked ∗ are for adjustment.

(7905E Model Only)

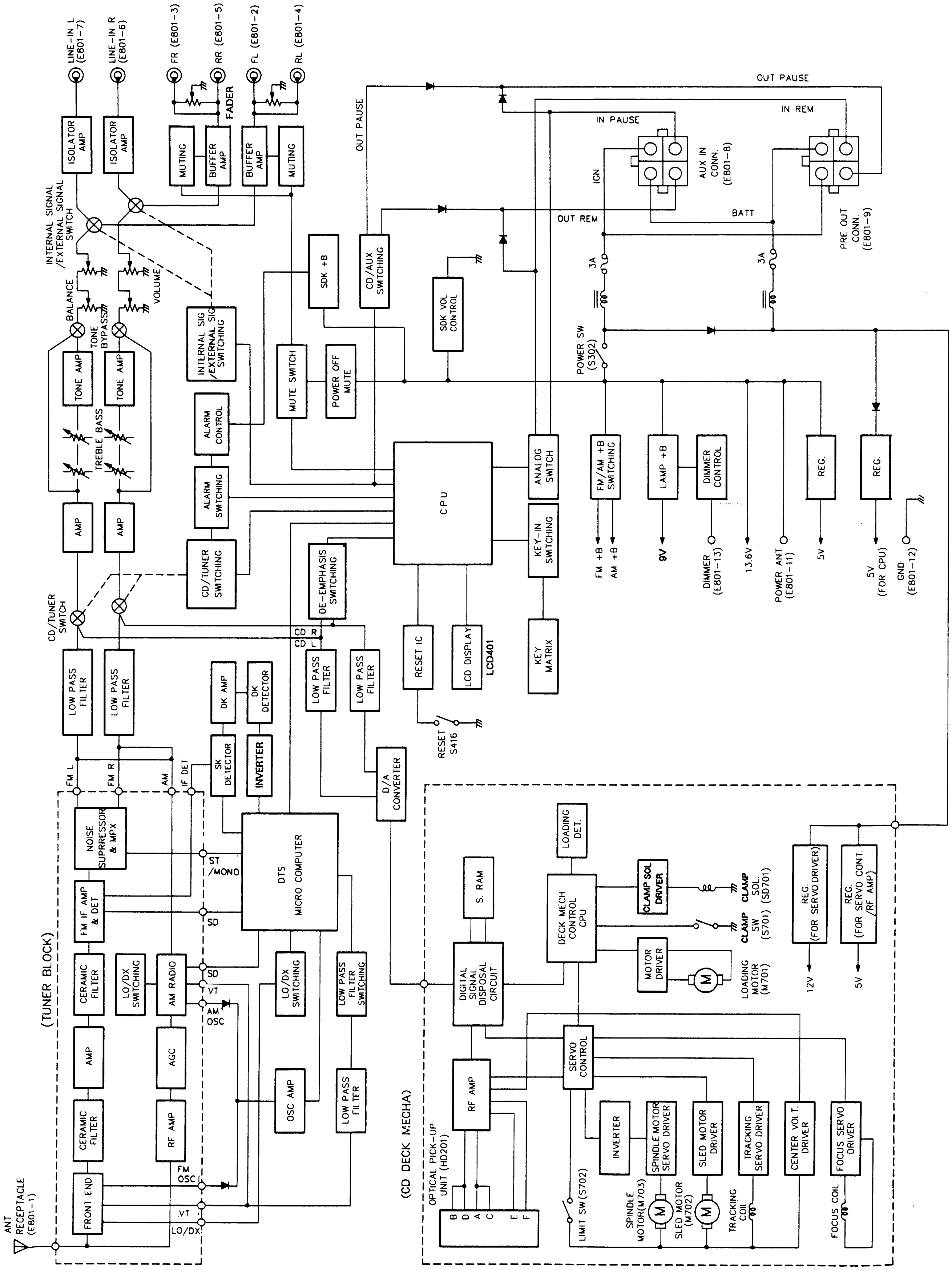

F OUT (FM) 5
FE2001
IF-OUT 8
GND 7
F-OUT 6
VT 5
+B 4
L/D 3
GND 2
ANT 1
ANT 1
GND 2
IF DET OUT 17
+B (FM) 7
VT 4
F OUT (AM) 8
L/D 3
L2001 12μH
TH2002 100K
C2006 100/16
C2005 0.022
C2003 0.033
R2007 10K
C2004 100P
R2005 10
R2001 3.3K
R2002 330
C2002 0.01
Q2001
IC2003
CF2001
R2003 470
*R2004 160
DSP2001
R2006 330
CF2002
C2017 4.7/2.5
C2009 0.01
C2008 0.01
C2010 0.01
VR2005 10K STOP
C2011 0.22/50
C2012 1/50
R2011 4.7K
C2013 0.1/50
R2012 12K MUTE
VR2001 10K
C2014 10/16
C2015 15P
R2008 1K
C2007 10P
T2030
R2009 22K
13 10.7MHz IF OUT
16 SD
12 0V
15 0V
22 VCO(19K)
23 VCO
21 S.I
C2001 0.01
R2040 10
C2052 22/16
C2050 0.01
*R2041 47K
C2053 680P
R2042 12K
VR2002 6.8K 19K
C2055 390P
180K
R2044 10
C2054 0.1/50
C2058 0.22/50
R2043 3.3K
C2057 0.1/50
C2059 1/50
IC2002
*LD2001
ATC ASC
R2051 100K
20 MONO
19 R-CH
13 L-CH
*R2046 1.5K
C2060 0.047
C2061 0.047
C2062 0.1/50
C2063 3300P
C2064 0.01
C2065 4.7/25
*R2047 220K
*R2048 6.8K
VR2003 2.2K SEP
*C2066 0.015
*R2050 56K
BLEND
*VR2004 220K
*R2049 47K
*R2052 75K
C2067 0.33/50
R2021 47
R2022 47
C2024 0.047
VD2001
C2020 0.01
C2021 33P
T2001
T2002
R2023 1.1K
CF2004
R2024 330
C2028 0.047
X2001
C2025 2.2/50
C2026 51P
C2027 10P
R2018 4.7K
R2020 100K
C2022 330P
C2023 0.047
L2004
CF2003
C2030 0.01
R2045 240K
IC2001
L2008 10μH
R2026 22
L2003
R2027 1.5K
L2006 100μH
C2033 0.022
C2035 0.022
C2039 2.2/50
R2031 3.3K
R2033 9.1K
C2042 22/16
C2044 0.01
R2035 2.2K
D2005
11 S-METER
L2005 4.7μH
C2029 0.047
C2031 47P
C2034 100P
C2037 47/16
R2034 2.7K
10 AF OUT (AM)
C2043 0.015
R2017 3.9K
Q2003
C2019 0.022
C2036 0.033
D2003
C2038 0.022
C2041 0.01
T2003
C2047 100/16
L2002
Q2004
D2002
C2046 2.2/50
D2004
6 450KHz SD OUT (AM)
Q2005
14 MUTE IN
D2001
R2030 15K
R2032 10K
R2029 10K
9 +B (AM)

D2002 : DA204K
D2001, 2004 : MA151K
D2003 : ISV172
D2005 : MA151WK
VD2001 : SVC212
X2001 : 10.26MHz
CF2003 : 10.7MJ
CF2004 : SFP450H12

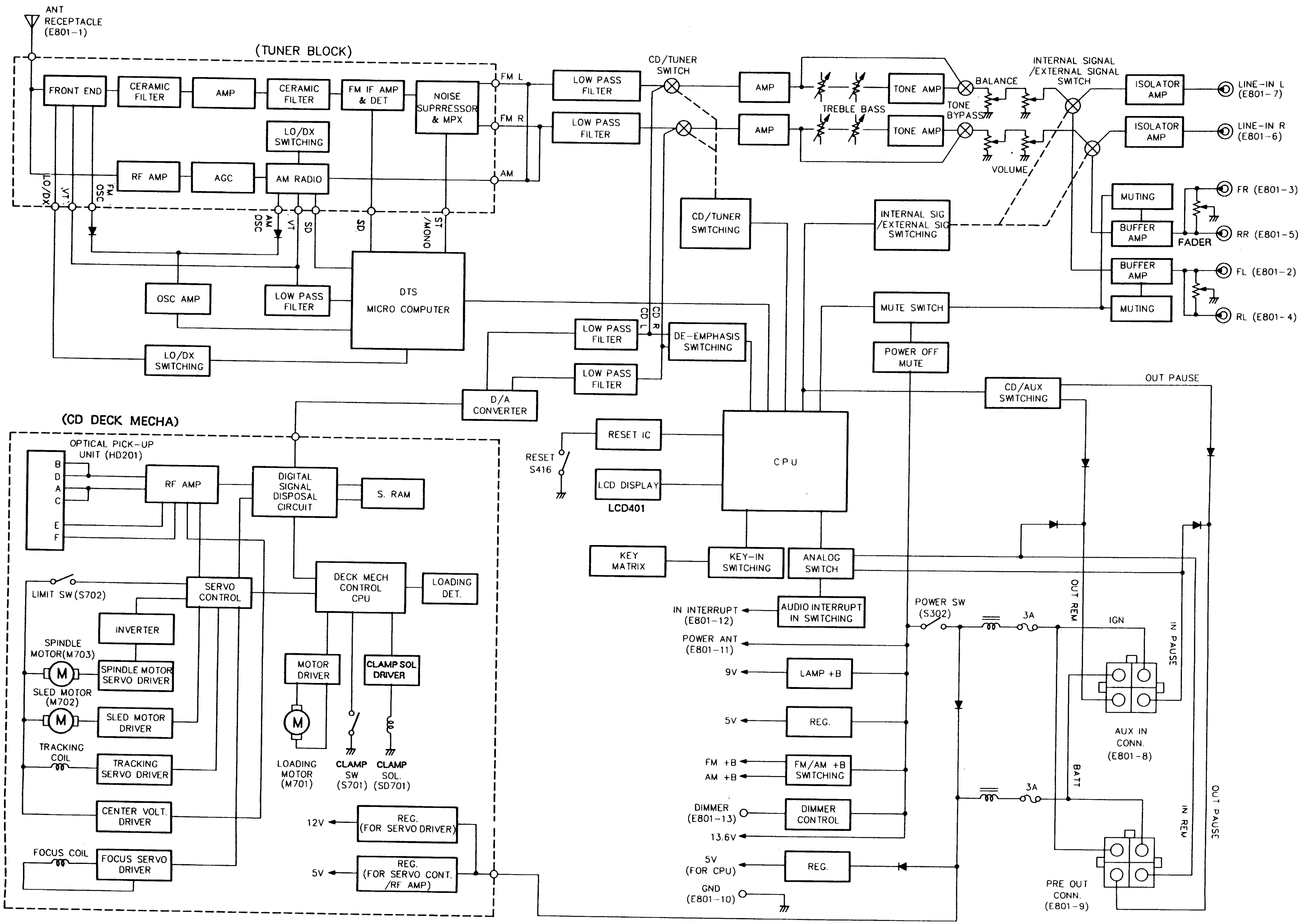
Note : All resistance values are in ohms. K=1,000
All capacitance values are in microfarads. $P=\frac{1}{1,000,000}$
Parts marked * are for adjustment.

Block Diagram

(7905M Model Only)

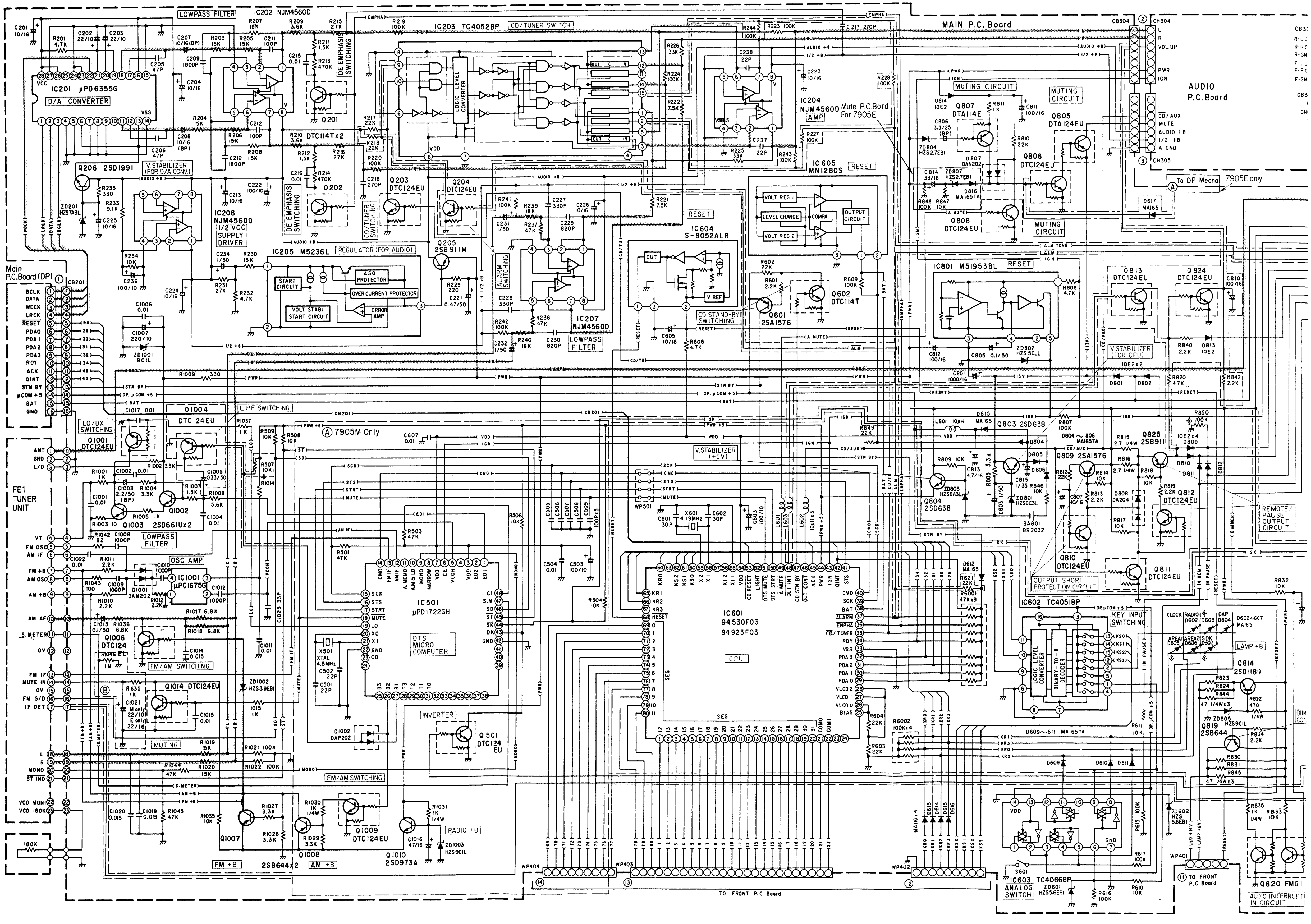

LINE-IN L (E801-7)
LINE-IN R (E801-6)
FR (E801-3)
RR (E801-5)
FL (E801-2)
RL (E801-4)
FADER
ISOLATOR AMP
MUTING
BUFFER AMP
INTERNAL SIGNAL /EXTERNAL SIGNAL SWITCH
BALANCE
VOLUME
TONE BYPASS
TONE AMP
TREBLE
BASS
AMP
CD/TUNER SWITCH
LOW PASS FILTER
FM L
FM R
AM
IF DET
INTERNAL SIG /EXTERNAL SIG SWITCHING
ALARM CONTROL
ALARM SWITCHING
CD/TUNER SWITCHING
SDK +B
CD/AUX SWITCHING
SDK VOL CONTROL
MUTE SWITCH
POWER OFF MUTE
DE-EMPHASIS SWITCHING
CD R
CD L
CPU
ANALOG SWITCH
KEY-IN SWITCHING
KEY MATRIX
RESET IC
LCD DISPLAY
LCD401
RESET S416
FM/AM +B SWITCHING
LAMP +B
DIMMER CONTROL
REG.
FM +B
AM +B
9V
DIMMER (E801-13)
13.6V
POWER ANT (E801-11)
5V
5V (FOR CPU)
GND (E801-12)
OUT PAUSE
IN PAUSE
IN REM
IGN
AUX IN CONN. (E801-8)
OUT REM
BATT
PRE OUT CONN. (E801-9)
3A
POWER SW (S302)
DK AMP
DK DETECTOR
SK DETECTOR
INVERTER
D/A CONVERTER
DTS MICRO COMPUTER
ST /MONO
SD
VT
AM OSC
FM OSC
LO/DX
NOISE SUPPRESSOR & MPX
FM IF AMP & DET
CERAMIC FILTER
LO/DX SWITCHING
AM RADIO
AGC
RF AMP
FRONT END
LOW PASS FILTER SWITCHING
OSC AMP
(TUNER BLOCK)
ANT RECEPTACLE (E801-1)
(CD DECK MECHA)
LOADING DET.
S. RAM
DECK MECH CONTROL CPU
CLAMP SOL DRIVER
CLAMP SOL (SD701)
CLAMP SW (S701)
MOTOR DRIVER
LOADING MOTOR (M701)
DIGITAL SIGNAL DISPOSAL CIRCUIT
SERVO CONTROL
REG. (FOR SERVO DRIVER)
REG. (FOR SERVO CONT. /RF AMP)
12V
5V
OPTICAL PICK-UP UNIT (HD201)
B
D
A
C
E
F
LIMIT SW (S702)
INVERTER
SPINDLE MOTOR SERVO DRIVER
SLED MOTOR DRIVER
TRACKING SERVO DRIVER
CENTER VOLT. DRIVER
FOCUS SERVO DRIVER
SPINDLE MOTOR(M703)
SLED MOTOR (M702)
TRACKING COIL
FOCUS COIL
M

(7905E Model Only)

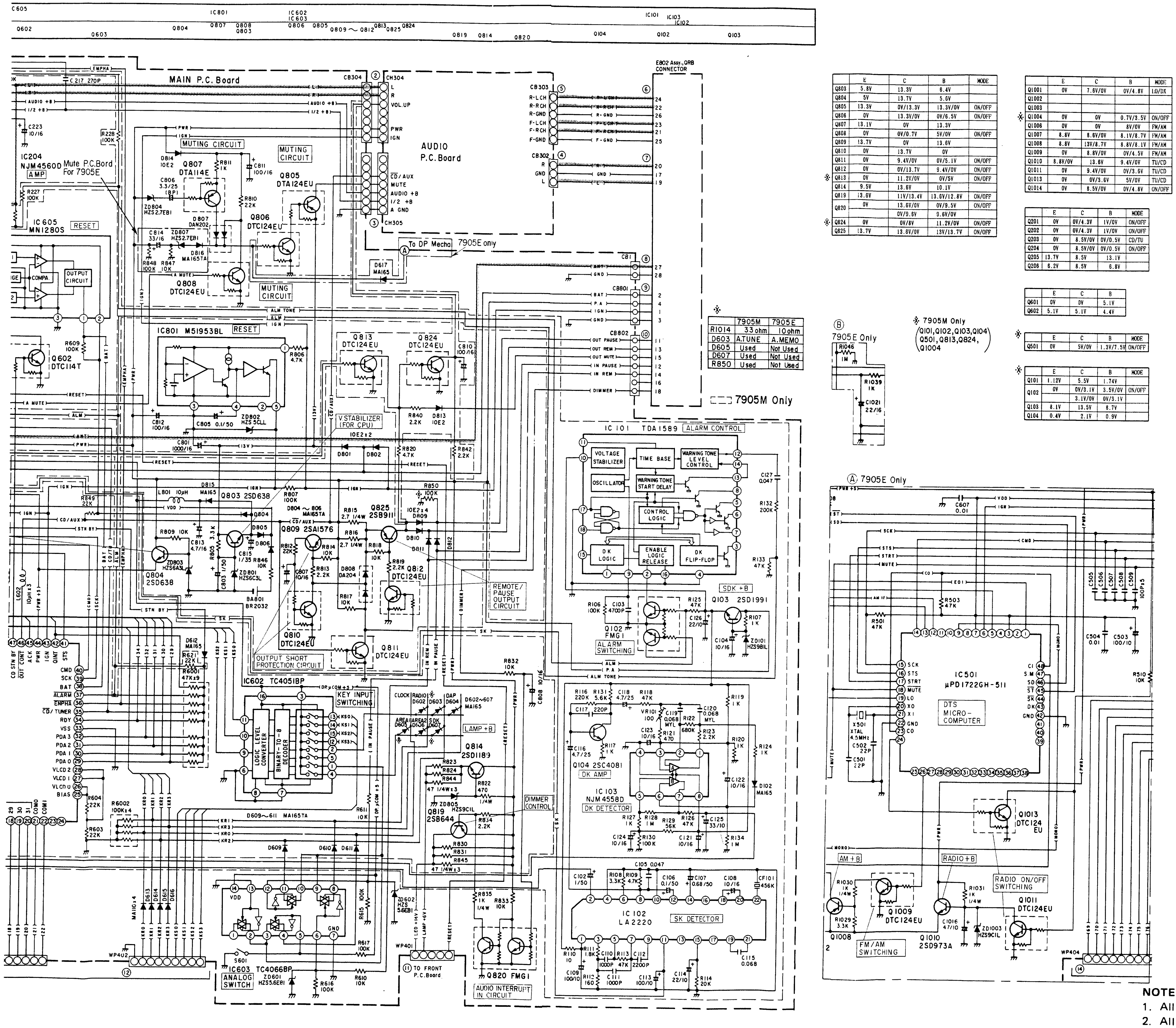

ANT RECEPTACLE (E801-1)
(TUNER BLOCK)
FRONT END
CERAMIC FILTER
AMP
CERAMIC FILTER
FM IF AMP & DET
NOISE SUPPRESSOR & MPX
LO/DX SWITCHING
RF AMP
AGC
AM RADIO
FM L
FM R
AM
LO/DX
VT
FM OSC
AM OSC
VT
SD
SD
ST /MONO
OSC AMP
LOW PASS FILTER
DTS MICRO COMPUTER
LO/DX SWITCHING
LOW PASS FILTER
LOW PASS FILTER
CD/TUNER SWITCH
CD/TUNER SWITCHING
AMP
AMP
TREBLE BASS
TONE AMP
TONE AMP
BALANCE
TONE BYPASS
VOLUME
INTERNAL SIGNAL /EXTERNAL SIGNAL SWITCH
ISOLATOR AMP
ISOLATOR AMP
LINE-IN L (E801-7)
LINE-IN R (E801-6)
MUTING
BUFFER AMP
BUFFER AMP
MUTING
FADER
FR (E801-3)
RR (E801-5)
FL (E801-2)
RL (E801-4)
INTERNAL SIG /EXTERNAL SIG SWITCHING
MUTE SWITCH
POWER OFF MUTE
CD R
CD L
LOW PASS FILTER
LOW PASS FILTER
DE-EMPHASIS SWITCHING
D/A CONVERTER
CD/AUX SWITCHING
OUT PAUSE
RESET IC
RESET S416
LCD DISPLAY
LCD401
CPU
KEY MATRIX
KEY-IN SWITCHING
ANALOG SWITCH
AUDIO INTERRUPT IN SWITCHING
IN INTERRUPT (E801-12)
POWER ANT (E801-11)
9V
LAMP +B
5V
REG.
FM +B
AM +B
FM/AM +B SWITCHING
DIMMER (E801-13)
DIMMER CONTROL
13.6V
5V (FOR CPU)
REG.
GND (E801-10)
POWER SW (S302)
3A
3A
OUT REM
IGN
IN PAUSE
BATT
IN REM
OUT PAUSE
AUX IN CONN. (E801-8)
PRE OUT CONN. (E801-9)
(CD DECK MECHA)
OPTICAL PICK-UP UNIT (HD201)
B
D
A
C
E
F
RF AMP
DIGITAL SIGNAL DISPOSAL CIRCUIT
S. RAM
DECK MECH CONTROL CPU
LOADING DET.
LIMIT SW (S702)
SERVO CONTROL
INVERTER
SPINDLE MOTOR(M703)
SPINDLE MOTOR SERVO DRIVER
SLED MOTOR (M702)
SLED MOTOR DRIVER
TRACKING COIL
TRACKING SERVO DRIVER
CENTER VOLT. DRIVER
FOCUS COIL
FOCUS SERVO DRIVER
MOTOR DRIVER
M
M
M
LOADING MOTOR (M701)
CLAMP SW (S701)
CLAMP SOL DRIVER
CLAMP SOL. (SD701)
12V
REG. (FOR SERVO DRIVER)
5V
REG. (FOR SERVO CONT. /RF AMP)

Schematic Diagram (1/3)

IC	IC201 IC206 IC1001 IC202 IC205 IC501 IC203 IC207 IC604 IC204 IC601 IC605 IC801 IC602 IC603
Transistor(Q)	Q206 Q1003 Q1006 Q1002 Q1014 Q1001 Q1007 Q1008 Q201 Q202 Q1009 Q203 Q1010 Q205 Q204 Q501 Q1011 Q601 Q602 Q603 Q804 Q807 Q808 Q803 Q806 Q805 Q809 ~ Q812 Q813 Q825 Q824 Q819 Q814 Q820



LOWPASS FILTER
IC202 NJM4560D
IC201 μPD6355G
D/A CONVERTER
Q206 2SD1991
V.STABILIZER (FOR D/A CONV.)
IC206 NJM4560D
1/2 VCC SUPPLY DRIVER
IC205 M5236L
REGULATOR (FOR AUDIO)
START CIRCUIT
ASO PROTECTOR
OVER CURRENT PROTECTOR
VOLT. STABI START CIRCUIT
ERROR AMP
DE EMPHASIS SWITCHING
Q201
DTC114T×2
Q202
Q203 DTC124EU
CD/TUNER SWITCHING
Q204 DTC124EU
Q205 2SB911M
IC203 TC4052BP
CD/TUNER SWITCH
LOGIC LEVEL CONVERTER
ALARM SWITCHING
IC207 NJM4560D
LOWPASS FILTER
IC204 NJM4560D
AMP
Mute P.C.Bord For 7905E
IC605 MN1280S
RESET
IC604 S-8052ALR
VOLT REG 1
LEVEL CHANGE
COMPA
VOLT REG 2
OUTPUT CIRCUIT
V.REF
CD STAND-BY SWITCHING
Q601 2SA1576
Q602 DTC114T
MAIN P.C. Board
CB304
CH304
CH305
AUDIO P.C.Board
MUTING CIRCUIT
Q807 DTA114E
Q805 DTA124EU
Q806 DTC124EU
Q808 DTC124EU
To DP Mecha
7905E only
IC801 M51953BL
Q813 DTC124EU
Q824 DTC124EU
V.STABILIZER (FOR CPU)
Q803 2SD638
Q809 2SA1576
Q825 2SB911
Q804 2SD638
Q810 DTC124EU
Q811 DTC124EU
Q812 DTC124EU
REMOTE/PAUSE OUTPUT CIRCUIT
OUTPUT SHORT PROTECTION CIRCUIT
Main P.C.Board (DP)
CB201
BCLK
DATA
WDCK
LRCK
RESET
PDA0
PDA1
PDA2
PDA3
RDY
ACK
QINT
STN BY
μCOM +5
BAT
GND
FE1 TUNER UNIT
ANT
GND
L/D
VT
FM OSC
AM IF
FM +B
AM OSC
AM +B
AM AF
S.METER
OV
FM IF
MUTE IN
FM S/D
IF DET
L
R
MONO
ST IND
VCO MON
VCO 180K
180K
LO/DX SWITCHING
Q1001 DTC124EU
Q1004 DTC124EU
L.P.F SWITCHING
Q1003 2SD661U×2
Q1002
LOWPASS FILTER
OSC AMP
IC1001 μPC1675G
Q1006 DTC124
FM/AM SWITCHING
Q1014 DTC124EU
MUTING
Q1007
Q1008
2SB644×2
FM +B
AM +B
Q1009 DTC124EU
FM/AM SWITCHING
Q1010 2SD973A
RADIO +B
Ⓐ 7905M Only
IC501 μPD1722GH
DTS MICRO COMPUTER
INVERTER
Q501 DTC124EU
V.STABILIZER (+5V)
IC601 94530F03 94923F03
CPU
IC602 TC4051BP
KEY INPUT SWITCHING
LOGIC LEVEL CONVERTER
BINARY-TO-8 DECODER
LAMP +B
Q814 2SD1189
Q819 2SB644
IC603 TC4066BP
ANALOG SWITCH
WP404
WP403
WP402
WP401
TO FRONT P.C. Board
⑪ TO FRONT P.C.Board
Q820 FMG1
AUDIO INTERRUPT IN CIRCUIT


MAIN P.C. Board
AUDIO P.C.Board
IC204 NJM4560D AMP
Mute P.C.Bord For 7905E
IC605 MN1280S RESET
MUTING CIRCUIT
Q807 DTA114E
Q805 DTA124EU
Q806 DTC124EU
Q808 DTC124EU
OUTPUT CIRCUIT
IC801 M51953BL RESET
Q602 DTC114T
Q813 DTC124EU
Q824 DTC124EU
V.STABILIZER (FOR CPU)
Q803 2SD638
Q804 2SD638
Q809 2SA1576
Q825 2SB911
Q812 DTC124EU
Q810 DTC124EU
Q811 DTC124EU
REMOTE/ PAUSE OUTPUT CIRCUIT
OUTPUT SHORT PROTECTION CIRCUIT
IC602 TC4051BP
LOGIC LEVEL CONVERTER
BINARY-TO-8 DECODER
KEY INPUT SWITCHING
LAMP+B
Q814 2SD1189
Q819 2SB644
DIMMER CONTROL
IC603 TC4066BP ANALOG SWITCH
TO FRONT P.C.Board
Q820 FMG1
AUDIO INTERRUPT IN CIRCUIT
To DP Mecha 7905E only
E802 Assy. ORB CONNECTOR
IC101 TDA1589 ALARM CONTROL
VOLTAGE STABILIZER
TIME BASE
WARNING TONE LEVEL CONTROL
OSCILLATOR
WARNING TONE START DELAY
CONTROL LOGIC
DK LOGIC
ENABLE LOGIC RELEASE
DK FLIP-FLOP
SDK+B
Q103 2SD1991
Q102 FMG1
ALARM SWITCHING
Q104 2SC4081 DK AMP
IC103 NJM4558D DK DETECTOR
IC102 LA2220 SK DETECTOR
7905M Only
Ⓑ 7905E Only
Ⓐ 7905E Only
IC501 µPD1722GH-511 DTS MICRO-COMPUTER
Q1013 DTC124EU
AM+B
RADIO+B
RADIO ON/OFF SWITCHING
Q1009 DTC124EU
Q1011 DTC124EU
Q1008
Q1010 2SD973A
FM/AM SWITCHING

※

	7905M	7905E
R1014	33ohm	10ohm
D603	A.TUNE	A.MEMO
D605	Used	Not Used
D607	Used	Not Used
R850	Used	Not Used

	E	C	B	MODE
Q803	5.8V	13.3V	6.4V	
Q804	5V	13.7V	5.6V	
Q805	13.3V	0V/13.3V	13.3V/0V	ON/OFF
Q806	0V	13.3V/0V	0V/6.5V	ON/OFF
Q807	13.1V	0V	13.3V	
Q808	0V	0V/0.7V	5V/0V	ON/OFF
Q809	13.7V	0V	13.6V	
Q810	0V	13.7V	0V	
Q811	0V	9.4V/0V	0V/5.1V	ON/OFF
Q812	0V	0V/13.7V	9.4V/0V	ON/OFF
※ Q813	0V	11.2V/0V	0V/5V	ON/OFF
Q814	9.5V	13.6V	10.1V	
Q819	13.6V	11V/13.4V	13.6V/12.8V	ON/OFF
Q820	0V	13.6V/0V	0V/9.5V	ON/OFF
		0V/9.6V	9.6V/0V	
※ Q824	0V	0V/8V	11.2V/0V	ON/OFF
Q825	13.7V	13.6V/0V	13V/13.7V	ON/OFF

	E	C	B	MODE
Q1001	0V	7.6V/0V	0V/4.8V	LO/DX
Q1002				
Q1003				
※ Q1004	0V	0V	0.7V/3.5V	ON/OFF
Q1006	0V	0V	8V/0V	FM/AM
Q1007	8.8V	8.6V/0V	8.1V/8.7V	FM/AM
Q1008	8.8V	13V/8.7V	8.8V/8.1V	FM/AM
Q1009	0V	8.8V/0V	0V/4.5V	FM/AM
Q1010	8.8V/0V	13.6V	9.4V/0V	TU/CD
Q1011	0V	9.4V/0V	0V/3.6V	TU/CD
Q1013	0V	0V/3.6V	5V/0V	TU/CD
Q1014	0V	8.5V/0V	0V/4.8V	ON/OFF

	E	C	B	MODE
Q201	0V	0V/4.3V	1V/0V	ON/OFF
Q202	0V	0V/4.3V	1V/0V	ON/OFF
Q203	0V	8.5V/0V	0V/0.5V	CD/TU
Q204	0V	8.5V/0V	0V/0.5V	ON/OFF
Q205	13.7V	8.5V	13.1V	
Q206	6.2V	8.5V	6.8V	

	E	C	B
Q601	0V	0V	5.1V
Q602	5.1V	5.1V	4.4V

※ 7905M Only
(Q101, Q102, Q103, Q104
Q501, Q813, Q824,
Q1004)

※

	E	C	B	MODE
Q501	0V	5V/0V	1.3V/7.5V	ON/OFF

※

	E	C	B	MODE
Q101	1.12V	5.5V	1.74V	
Q102	0V	0V/3.1V	3.5V/0V	ON/OFF
		3.1V/0V	0V/3.1V	
Q103	8.1V	13.5V	8.7V	
Q104	0.4V	2.1V	0.9V	

IC201

1		8	0V	15	0V	22	
2		9	0V	16	6.2V	23	0V
3		10	1.3V	17	2.6V/5.2V	24	0V
4	0V	11	2.6V/5.2V	18	2.6V/5.2V	25	0V
5	0V	12	2.6V/0V	19	3.6V	26	6.2V
6	6.2V	13	6.2V	20	2.6V	27	0V
7	0V	14	0V	21	3.6V	28	6.2V

IC501

1		13		25		37	
2		14		26	4.5V/0V	38	
3	5V	15		27	5V/0V	39	
4		16		28		40	
5		17		29		41	
6	5V	18	5V/0V	30		42	0V
7	5V	19	5V/0V	31		43	5V/0V
8		20		32		44	5V/0V
9	5V/0V	21		33		45	4.2V/0.6V
10	5V/0V	22	0V	34		46	4.2V/0V
11	5V/0V	23	5V	35		47	
12		24	5V/0V	36		48	5V

IC601

1		21		41		61	
2		22		42		62	
3		23		43	4.8V	63	
4		24		44	5V	64	
5		25	5V	45		65	
6		26	5V	46	5.1V/0V	66	
7		27	2.5V	47	5.1V	67	
8		28	2.5V	48	5.1V/0V	68	5V
9		29		49	5.1V/0V	69	
10		30		50		70	
11		31		51	5V/0V	71	
12		32		52		72	
13		33	0V	53	5V	73	
14		34		54	5V	74	
15		35	1.9V/0V	55	0V	75	
16		36	1V/0V	56		76	
17		37		57		77	
18		38	5.1V	58		78	
19		39		59		79	
20		40		60		80	

IC202

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC204

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC206

1	4.5V
2	4.5V
3	4.5V
4	0V
5	1.3V
6	1.1V
7	8V
8	8.5V

IC203

1	4.5V	9	8.5V/0V
2	(4.5V)/0.2V	10	8.5V/0V
3	4.5V	11	0.2V
4	0.2V	12	4.5V
5	4.5V	13	4.5V
6	0V	14	4.5V
7	0V	15	(4.5V)/0.2V
8	0V	16	8.5V

IC603

1		8	
2		9	
3		10	
4		11	
5	5.1V/0V	12	5.2V/0V
6	5.2V/0V	13	5.1V/0V
7	0V	14	5.1V

IC205

1	13.7V
2	8.5V
3	13V

IC207

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC1001

1	0V
2	4V
3	4.8V
4	1.1V

IC604

1	5V
2	5V
3	0V

IC801

1	8.7V
2	0V
3	0V
4	1.2V
5	4.8V

IC605

1	5.1V
2	5.1V
3	0V

※ IC101

1	3.1V	10	8.1V
2	3.1V/0V	11	8V
3	5.6V/0V	12	0V
4	0V	13	7.7V/0V
5	5.8V	14	7.7V/0V
6	0V	15	7.8V/3V
7	5.4V	16	0V
8	5.7V/0V	17	0V
9	3V	18	3V

※ IC102

1	7.9V	12	2.9V
2	2V	13	2.9V
3	2V	14	2.9V
4	0V	15	0V
5	2V	16	3.5V
6	1.5V	17	0V
7	2.1V	18	3V
8	0.5V/0.7V	19	3V
9	3V	20	3V
10	0V	21	3V
11	0V/3.7V	22	4.6V

※ IC103

1	4V
2	4V
3	4V
4	0V
5	5.3V/5.6V
6	3.8V/5.5V
7	7.8V/1.4V
8	8.1V

IC602

1		9	
2		10	
3	5.1V	11	
4		12	
5		13	
6	0V	14	5.2V/0V
7	0V	15	5.1V/0V
8	0V	16	5.1V

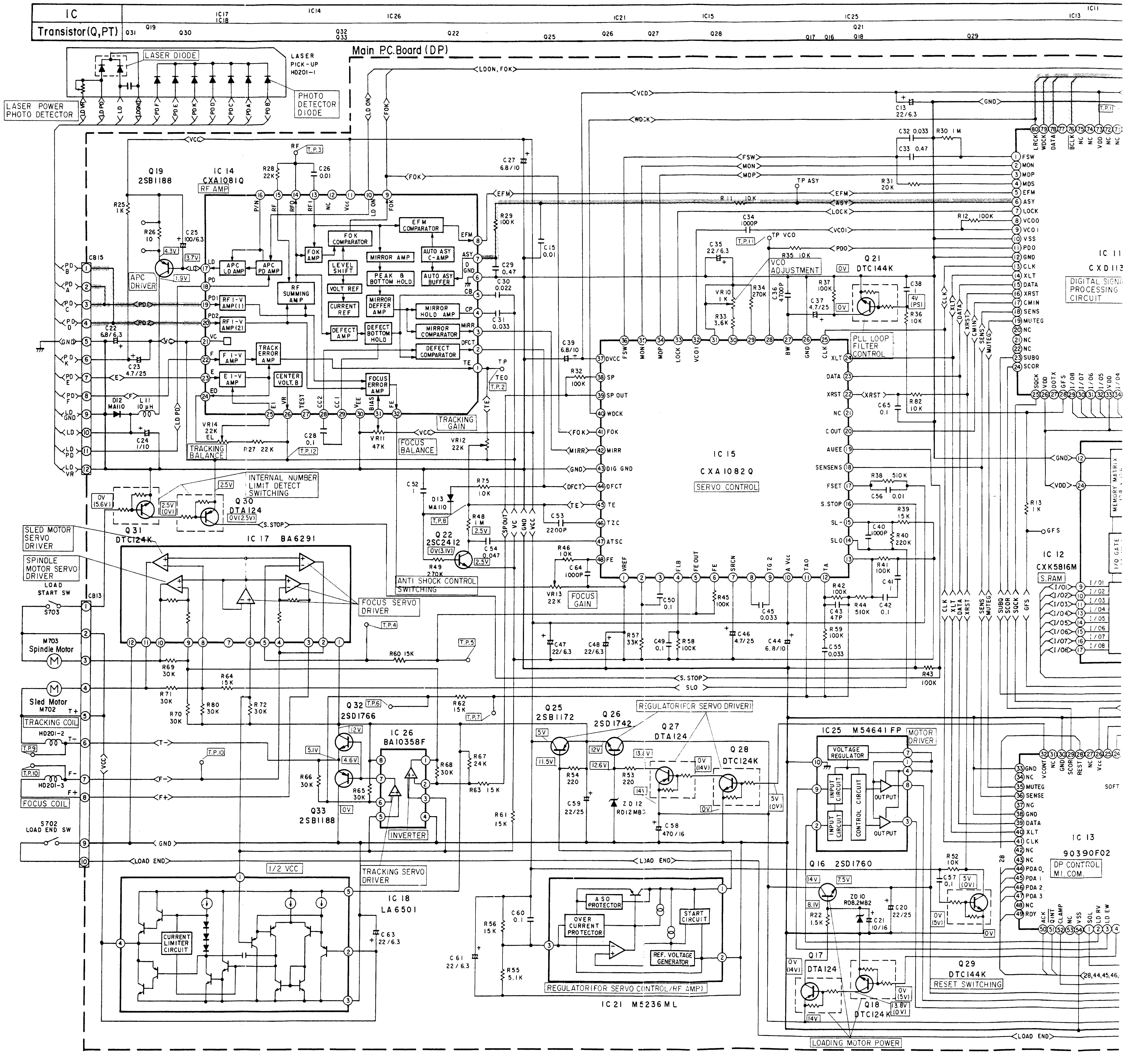
※ 7905M Only
(IC101, IC102, IC103)

NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

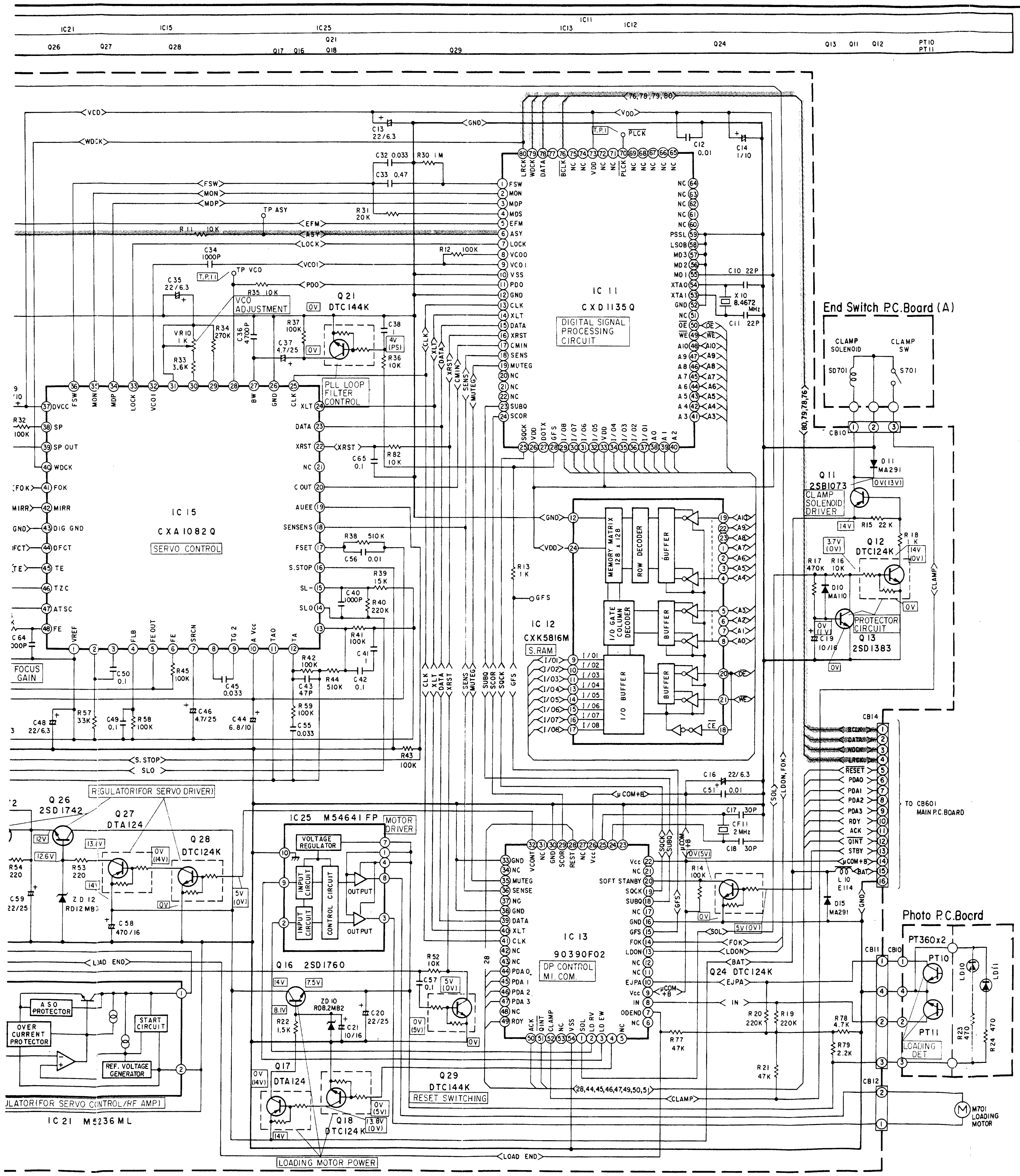
7905M/7905E

Schematic Diagram (2/3)


IC
Transistor(Q,PT)
IC17
IC18
IC14
IC26
IC21
IC15
IC25
IC11
IC13
Q31
Q19
Q30
Q32
Q33
Q22
Q25
Q26
Q27
Q28
Q17
Q16
Q21
Q18
Q29
Main P.C.Board (DP)
LASER DIODE
LASER PICK-UP H0201-1
PHOTO DETECTOR DIODE
LASER POWER PHOTO DETECTOR
Q19 2SB1188
IC 14 CXA1081Q
RF AMP
APC DRIVER
APC LD AMP
APC PD AMP
RF SUMMING AMP
RF I-V AMP(1)
RF I-V AMP(2)
F I-V AMP
E I-V AMP
TRACK ERROR AMP
CENTER VOLT.B
FOK COMPARATOR
FOK AMP
LEVEL SHIFT
VOLT REF
CURRENT REF
DEFECT AMP
MIRROR AMP
PEAK & BOTTOM HOLD
MIRROR DEFFER AMP
DEFECT BOTTOM HOLD
EFM COMPARATOR
AUTO ASY C-AMP
AUTO ASY BUFFER
MIRROR HOLD AMP
MIRROR COMPARATOR
DEFECT COMPARATOR
FOCUS ERROR AMP
TRACKING GAIN
FOCUS BALANCE
TRACKING BALANCE
INTERNAL NUMBER LIMIT DETECT SWITCHING
Q30 DTA124
Q31 DTC124K
IC 17 BA6291
SLED MOTOR SERVO DRIVER
SPINDLE MOTOR SERVO DRIVER
FOCUS SERVO DRIVER
LOAD START SW S703
M703 Spindle Motor
Sled Motor M702
TRACKING COIL H0201-2
FOCUS COIL H0201-3
S702 LOAD END SW
Q32 2SD1766
Q33 2SB1188
IC 26 BA10358F
INVERTER
TRACKING SERVO DRIVER
1/2 VCC
IC 18 LA6501
CURRENT LIMITER CIRCUIT
ANTI SHOCK CONTROL SWITCHING
Q22 2SC2412
IC 15 CXA1082Q
SERVO CONTROL
VCO ADJUSTMENT
Q21 DTC144K
PLL LOOP FILTER CONTROL
FOCUS GAIN
Q25 2SB1172
Q26 2SD1742
Q27 DTA124
Q28 DTC124K
REGULATOR(FOR SERVO DRIVER)
ASO PROTECTOR
OVER CURRENT PROTECTOR
START CIRCUIT
REF. VOLTAGE GENERATOR
REGULATOR(FOR SERVO CONTROL/RF AMP)
IC21 M5236ML
IC25 M54641FP
MOTOR DRIVER
VOLTAGE REGULATOR
INPUT CIRCUIT
CONTROL CIRCUIT
OUTPUT
Q16 2SD1760
Q17 DTA124
Q18 DTC124K
LOADING MOTOR POWER
Q29 DTC144K
RESET SWITCHING
IC 11 CXD113
DIGITAL SIGNAL PROCESSING CIRCUIT
IC 12 CXK5816M
S.RAM
IC 13 90390F02
DP CONTROL M.I.COM.
MEMORY MATRIX
I/O GATE
SOFT

NOTES:
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

7905M/7905E


IC21
IC15
IC25
IC11
IC13
IC12
Q26
Q27
Q28
Q17
Q16
Q21
Q18
Q29
Q24
Q13
Q11
Q12
PT10
PT11
IC 11
CXD1135Q
DIGITAL SIGNAL PROCESSING CIRCUIT
IC 15
CXA1082Q
SERVO CONTROL
IC 12
CXK5816M
S.RAM
MEMORY MATRIX 128 x 128
ROW DECODER
BUFFER
I/O GATE COLUMN DECODER
I/O BUFFER
IC 13
90390F02
DP CONTROL MI.COM
IC25 M54641FP
MOTOR DRIVER
VOLTAGE REGULATOR
INPUT CIRCUIT
CONTROL CIRCUIT
OUTPUT
Q21 DTC144K
VCO ADJUSTMENT
PLL LOOP FILTER CONTROL
FOCUS GAIN
Q 26 2SD1742
Q 27 DTA124
Q 28 DTC124K
REGULATOR(FOR SERVO DRIVER)
REGULATOR(FOR SERVO CONTROL/RF AMP)
IC 21 M5236ML
ASO PROTECTOR
OVER CURRENT PROTECTOR
START CIRCUIT
REF. VOLTAGE GENERATOR
Q16 2SD1760
Q17 DTA124
Q18 DTC124K
LOADING MOTOR POWER
Q29 DTC144K
RESET SWITCHING
Q24 DTC124K
End Switch P.C.Board (A)
CLAMP SOLENOID
CLAMP SW
SD701
S701
CB10
Q11 2SB1073
CLAMP SOLENOID DRIVER
Q12 DTC124K
Q13 2SD1383
PROTECTOR CIRCUIT
D11 MA291
D10 MA110
D15 MA291
CB14
TO CB601 MAIN P.C.BOARD
Photo P.C.Board
PT360x2
PT10
PT11
LOADING DET
LD10
LD11
CB11
CB12
M701 LOADING MOTOR
X10 8.4672 MHz
CF11 2MHz
TP VCO
TP ASY
T.P.I
PLCK
LOAD END
S.STOP
SLO
CLAMP
GND
VDD
VCO
WDCK
FSW
MON
MDP
EFM
ASY
LOCK
VCO1
PDO
XRST
RESET
PDA0
PDA1
PDA2
PDA3
RDY
ACK
QINT
STBY
μCOM+B
BAT
SOL
LDON
FOK
EJPA
IN

IC11

1	0V	17	PS	33	5V	49	PS	65	0V
2	4.9V	18	0V/PS	34	PS	50	PS	66	0V
3	PS	19	5V/PS	35	PS	51	PS	67	0V
4	PS	20	PS	36	PS	52	0V	68	0V
5	PS	21	PS	37	PS	53	PS	69	PS
6	PS	22	PS	38	PS	54	PS	70	PS
7	5V	23	PS	39	PS	55	5V	71	PS
8	PS	24	PS	40	PS	56	0V	72	0V
9	PS	25	PS	41	PS	57	0V	73	5V
10	0V	26	5V	42	PS	58	0V	74	0V
11	PS	27	PS	43	PS	59	0V	75	PS
12	0V	28	5V	44	PS	60	PS	76	PS
13	5V	29	PS	45	PS	61	PS	77	PS
14	5V	30	PS	46	PS	62	PS	78	PS
15	5V	31	PS	47	PS	63	0V	79	PS
16	5V	32	4.9V	48	PS	64	0V	80	PS

IC12

1	PS	13	PS
2	PS	14	PS
3	PS	15	PS
4	PS	16	PS
5	PS	17	PS
6	PS	18	PS
7	PS	19	PS
8	PS	20	PS
9	PS	21	PS
10	PS	22	PS
11	PS	23	PS
12	0V	24	5V

IC13

1	4.8V	19	PS	37	0V
2	5V	20	0V	38	0V
3	5V/0V	21	0V	39	5V/PS
4	0V	22	5V	40	5V/PS
5	0V	23	0V	41	5V/PS
6	0V	24	PS	42	0V
7	0V/4V	25	PS	43	0V
8	0V/4V	26	5V	44	PS/5V
9	5V	27	5V	45	PS/5V
10	0V	28	5V	46	PS/5V
11	0V	29	PS	47	PS/5V
12	0V	30	0V	48	0V
13	0V/5V	31	0V	49	5V
14	5V/0V	32	5V	50	5V
15	0V/5V	33	0V	51	PS
16	0V	34	0V	52	0V
17	0V	35	0V/5V	53	0V
18	PS	36	5V/0V	54	0V

IC14

1	2.5V	17	3.7V
2	PS	18	0.2V
3	PS	19	2.5V
4	1.3V	20	2.5V
5	1V	21	2.5V
6	0V	22	2.5V
7	2.5V	23	2.5V
8	0V	24	1.9V
9	5V	25	2.1V
10	0V/5V	26	2.5V
11	5V	27	2.4V
12	1.8V	28	1V
13	0V	29	1.4V
14	3.2V	30	0V
15	2.5V	31	2.6V
16	3.6V	32	2.5V

IC15

1	2.5V	17	0.8V	33	5V
2	2.5V	18	5V	34	PS
3	2.4V	19	0V	35	5V
4	2.5V	20	0V	36	2.5V
5	2.5V	21	5V/PS	37	5V
6	3V	22	5V/PS	38	2.5V
7	2.6V	23	5V/PS	39	1.9V
8	2.5V	24	5V/PS	40	PS
9	2.5V	25	5V/PS	41	5V
10	5V	26	0V	42	PS
11	2.5V	27	2.5V	43	0V
12	2.5V	28	2.5V	44	PS
13	2.5V	29	2.3V	45	2.5V
14	2.7V	30	2.4V	46	2.5V
15	2.5V	31	3.6V	47	2.5V
16	0V/5V	32	PS	48	2.5V

IC17

1	12V
2	5.8V
3	5.5V
4	5.8V
5	5.6V
6	5.6V
7	0.3V
8	5.6V
9	4.5V
10	6.8V
11	5.3V
12	0V

IC25

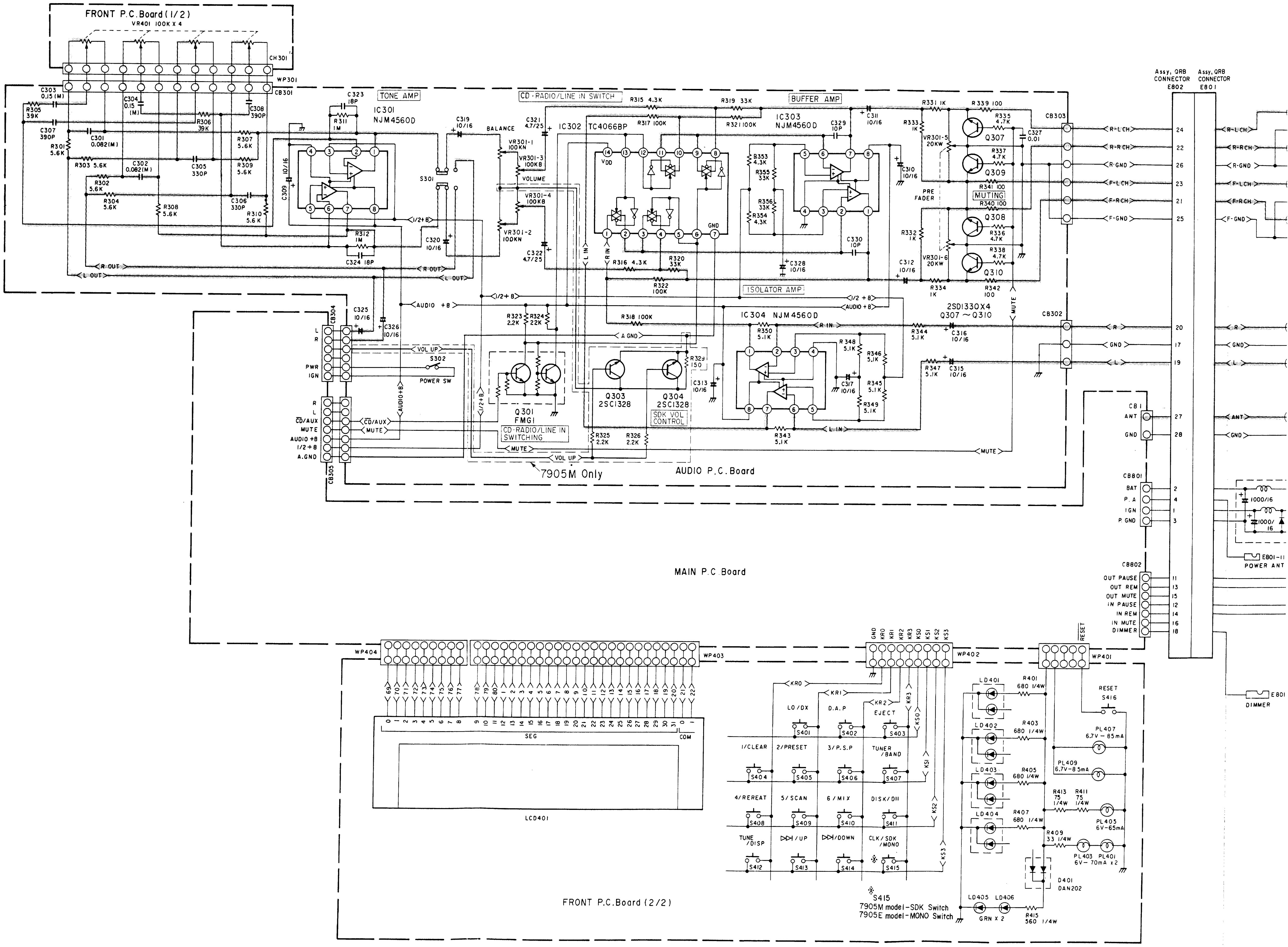
1	6.1V
2	5V/0V
3	0V/6V
4	6.1V
5	–
6	–
7	6.1V
8	0V/6V
9	5V/0V
10	0V

IC26

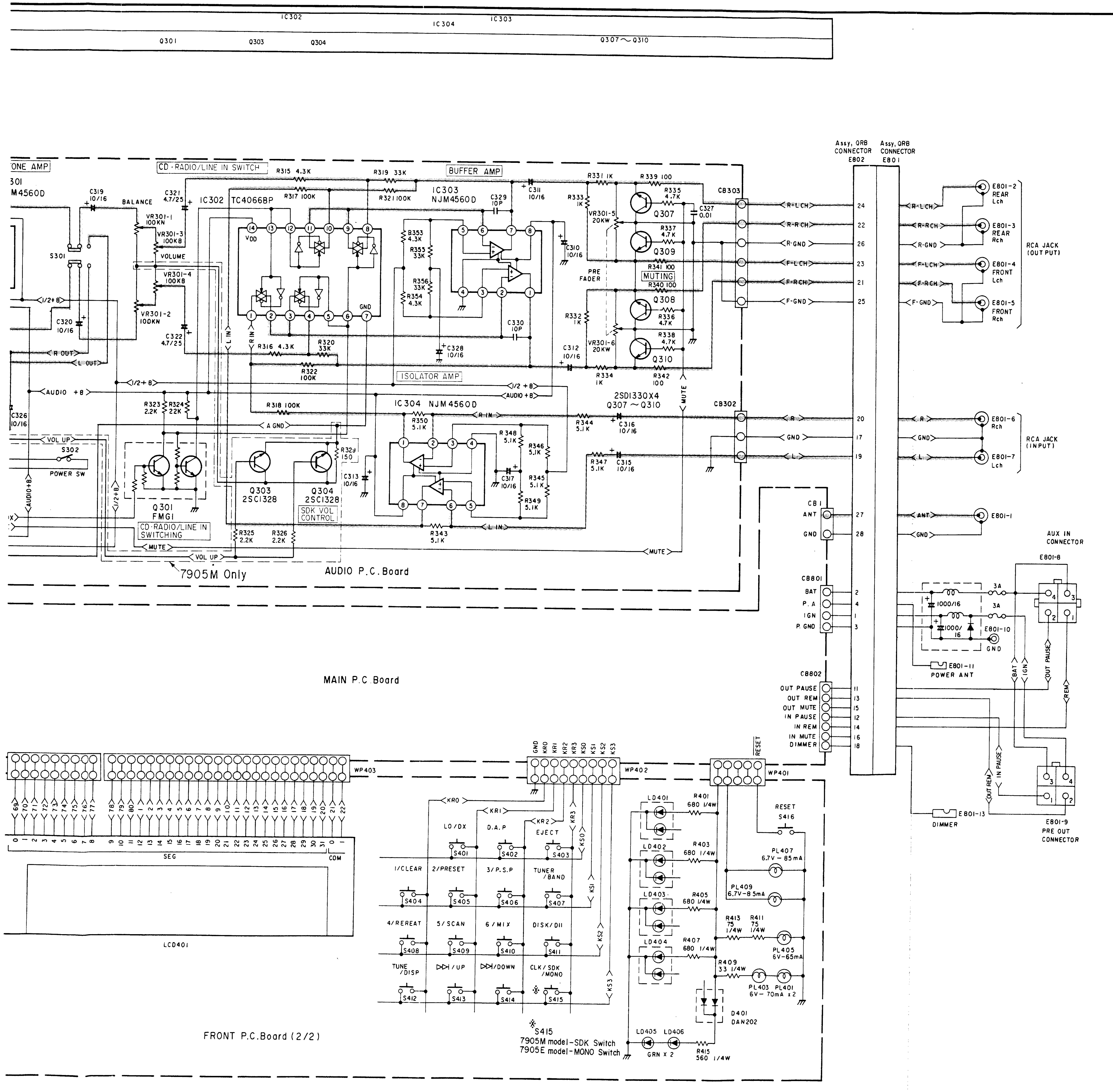
1	4.3V
2	5.6V
3	5.6V
4	0V
5	5.6V
6	5.6V
7	4.6V
8	12V

Schematic Diagram (3/3)

IC	IC301	IC302	IC304	IC303	
Transistor(Q)	Q301	Q303	Q304		Q307～Q310



FRONT P.C.Board (1/2)
VR401 100K X 4
CH301
WP301
CB301
TONE AMP
IC301
NJM4560D
CD·RADIO/LINE IN SWITCH
IC302 TC4066BP
BUFFER AMP
IC303
NJM4560D
BALANCE
VOLUME
PRE FADER
MUTING
ISOLATOR AMP
IC304 NJM4560D
2SD1330X4
Q307～Q310
Q301
FMG1
Q303
2SC1328
Q304
2SC1328
SDK VOL CONTROL
CD·RADIO/LINE IN SWITCHING
S301
S302
POWER SW
7905M Only
AUDIO P.C.Board
MAIN P.C Board
CB303
CB302
CB304
CB305
CB1
CB801
CB802
Assy, QRB CONNECTOR E802
Assy, QRB CONNECTOR E801
R·L·CH
R·R·CH
R·GND
F·L·CH
F·R·CH
F·GND
ANT
GND
BAT
P.A
IGN
P.GND
OUT PAUSE
OUT REM
OUT MUTE
IN PAUSE
IN REM
IN MUTE
DIMMER
POWER ANT
E801
WP404
WP403
WP402
WP401
LCD401
SEG
COM
LO/DX
D.A.P
EJECT
1/CLEAR
2/PRESET
3/P.S.P
TUNER /BAND
4/REREAT
5/SCAN
6/MIX
DISK/D11
TUNE /DISP
CLK/SDK /MONO
RESET
S416
LD401
LD402
LD403
LD404
LD405 LD406
GRN X 2
PL407 6.7V－85mA
PL409 6.7V－8 5mA
PL405 6V－65mA
PL403 PL401 6V－70mA x 2
D401 DAN202
FRONT P.C.Board (2/2)
※S415
7905M model－SDK Switch
7905E model－MONO Switch


IC302
IC304
IC303
Q301
Q303
Q304
Q307～Q310
ONE AMP
CD·RADIO/LINE IN SWITCH
BUFFER AMP
IC302 TC4066BP
IC303 NJM4560D
IC304 NJM4560D
ISOLATOR AMP
PRE FADER
MUTING
2SD1330X4
Q307～Q310
BALANCE
VOLUME
S301
S302
POWER SW
Q301
FMG1
Q303
2SC1328
Q304
2SC1328
SDK VOL CONTROL
CD·RADIO/LINE IN SWITCHING
7905M Only
AUDIO P.C.Board
MAIN P.C.Board
FRONT P.C.Board (2/2)
Assy, QRB CONNECTOR E802
Assy, QRB CONNECTOR E801
CB303
CB302
CB1
CB801
CB802
RCA JACK (OUTPUT)
RCA JACK (INPUT)
E801-2 REAR Lch
E801-3 REAR Rch
E801-4 FRONT Lch
E801-5 FRONT Rch
E801-6 Rch
E801-7 Lch
E801-1
AUX IN CONNECTOR
E801-8
E801-10
GND
E801-11 POWER ANT
E801-13 DIMMER
E801-9 PRE OUT CONNECTOR
OUT PAUSE
OUT REM
OUT MUTE
IN PAUSE
IN REM
IN MUTE
DIMMER
WP403
WP402
WP401
RESET
S416
LCD401
SEG
COM
1/CLEAR
2/PRESET
3/P.S.P
TUNER /BAND
4/REREAT
5/SCAN
6/MIX
DISK/D11
TUNE /DISP
⏭/UP
⏮/DOWN
CLK/SDK /MONO
LO/DX
D.A.P
EJECT
S401
S402
S403
S404
S405
S406
S407
S408
S409
S410
S411
S412
S413
S414
S415
※S415
7905M model-SDK Switch
7905E model-MONO Switch
LD401
LD402
LD403
LD404
LD405
LD406
GRN x 2
PL407 6.7V-85mA
PL409 6.7V-85mA
PL405 6V-65mA
PL403 PL401 6V-70mA x2
D401 DAN202

	E	C	B	MODE
Q301	0V	7.7V/0V	0V/5V	ON/OFF
		0V/8.3V	7.7V/0V	
※ Q303	4.5V	4.5V	0V/5.2V	ON/OFF
※ Q304	4.5V	4.5V	0V/5.2V	ON/OFF
Q307	0V	0V	0.7V/0V	ON/OFF
Q308	0V	0V	0.7V/0V	ON/OFF
Q309	0V	0V	0.7V/0V	ON/OFF
Q310	0V	0V	0.7V/0V	ON/OFF

IC301

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

※7905M Only
(Q303,Q304)

IC302

1	4.5V	8	4.5V
2	4.5V	9	4.5V
3	4.5V	10	4.5V
4	4.5V	11	4.5V
5	7.7V/0V	12	0V/8.3V
6	7.7V/0V	13	0V/8.3V
7	0V	14	8.5V

IC303

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

IC304

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

[Measuring Conditions]
- Power Supply : 14V DC
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point : Between Ground
- Condition : CD···YEDS 18 (PLAY)
  FM···98.1MHz
  MW···999kHz
  LW···218kHz

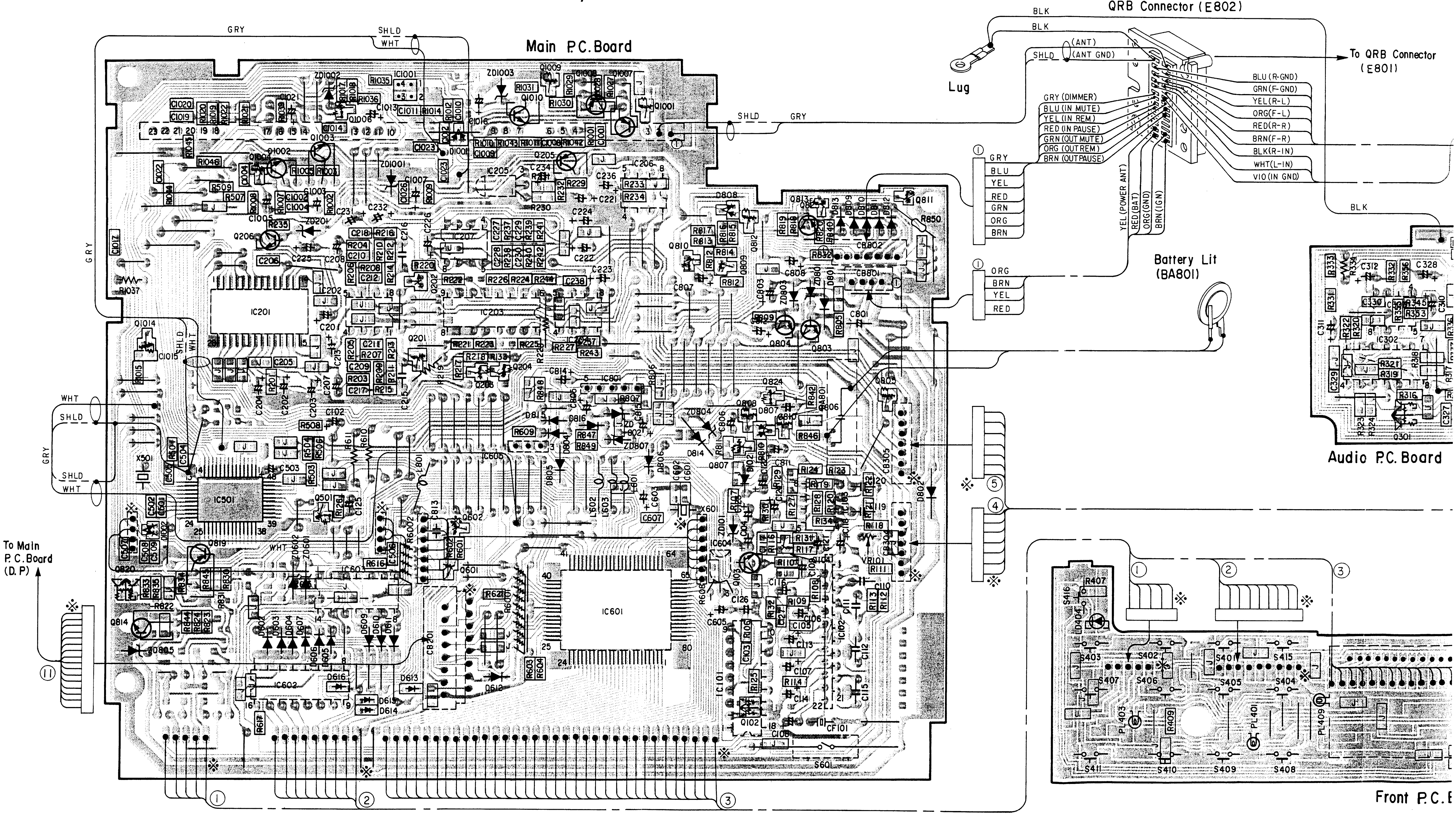
NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. P = $\frac{1}{1,000,000}$

7905M/7905E

Parts Layout on P.C. Boards and Wiring Diagram (1/3)

●7905M Model Only


Main P.C. Board
QRB Connector (E802)
To QRB Connector (E801)
Lug
BLK
SHLD
(ANT)
(ANT GND)
GRY (DIMMER)
BLU (IN MUTE)
YEL (IN REM)
RED (IN PAUSE)
GRN (OUT MUTE)
ORG (OUT REM)
BRN (OUT PAUSE)
BLU (R-GND)
GRN (F-GND)
YEL (R-L)
ORG (F-L)
RED (R-R)
BRN (F-R)
BLK (R-IN)
WHT (L-IN)
VIO (IN GND)
YEL (POWER ANT)
RED (BAT)
ORG (GND)
BRN (IGN)
Battery Lit (BA801)
Audio P.C. Board
Front P.C. B
To Main P.C. Board (D.P)
GRY
WHT
SHLD
IC201
IC203
IC501
IC601
IC602
IC801
IC1001
IC205
IC206
IC207
X501
X601
CF101
S601
S401
S402
S403
S404
S405
S406
S407
S408
S409
S410
S411
S415
S416
PL401
PL403
PL409
R407
R409
Q404
Q1001
Q1002
Q1003
Q1004
Q1007
Q1009
Q1010
Q201
Q204
Q205
Q206
Q501
Q502
Q601
Q801
Q803
Q804
Q805
Q807
Q808
Q810
Q811
Q812
Q813
Q814
Q819
Q820
Q824
Q102
Q103
ZD1001
ZD1002
ZD1003
ZD801
ZD803
ZD804
ZD807
ZD601
ZD602
ZD101
D801
D802
D804
D805
D806
D808
D809
D810
D811
D812
D813
D814
D815
D816
D603
D604
D605
D606
D607
D609
D610
D611
D612
D613
D614
D615
D616
C312
C328
C311
C327
C329
IC302
Q301
R316
R317
R318
R319
R321
R322
R323
R324
R320
R333
R334
R336
R345
R353
①
②
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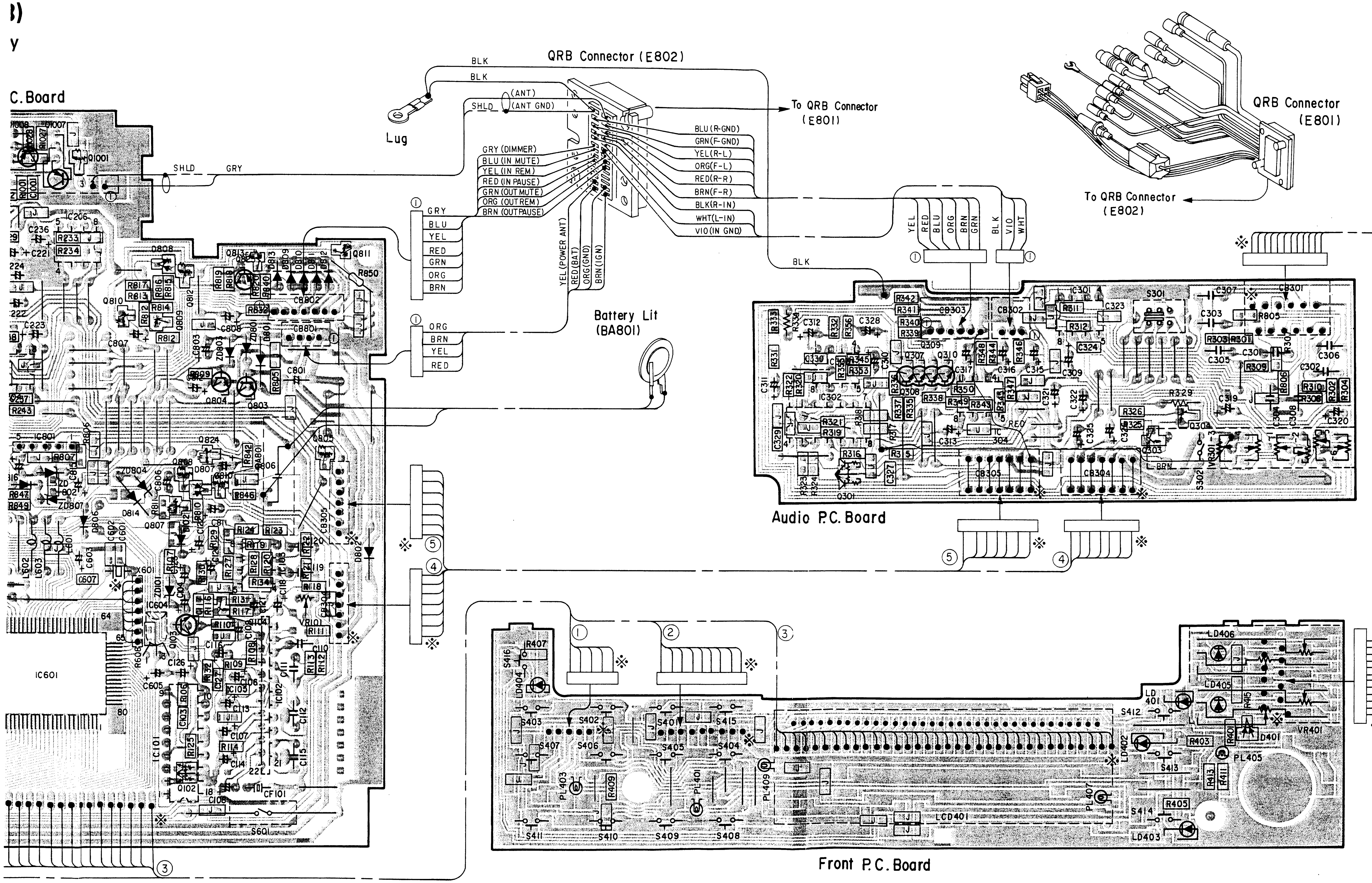
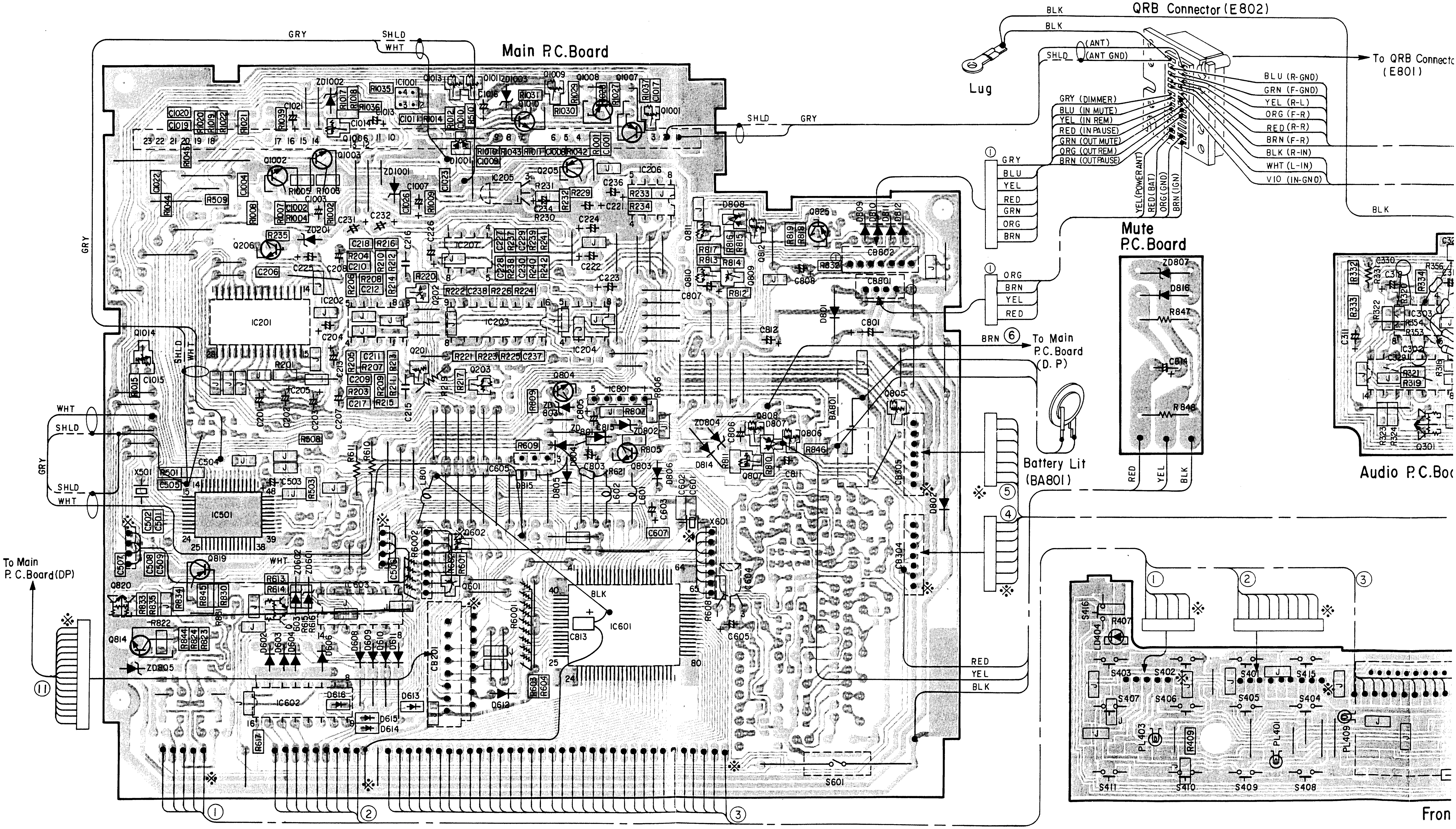

C. Board
QRB Connector (E802)
BLK
BLK
(ANT)
SHLD
(ANT GND)
Lug
To QRB Connector (E801)
BLU (R-GND)
GRN (F-GND)
YEL (R-L)
ORG (F-L)
RED (R-R)
BRN (F-R)
BLK (R-IN)
WHT (L-IN)
VIO (IN GND)
GRY (DIMMER)
BLU (IN MUTE)
YEL (IN REM)
RED (IN PAUSE)
GRN (OUT MUTE)
ORG (OUT REM)
BRN (OUTPAUSE)
YEL (POWER ANT)
RED (BAT)
ORG (GND)
BRN (IGN)
SHLD
GRY
GRY
BLU
YEL
RED
GRN
ORG
BRN
ORG
BRN
YEL
RED
Battery Lit (BA801)
YEL
RED
BLU
ORG
BRN
GRN
BLK
VIO
WHT
BLK
QRB Connector (E801)
To QRB Connector (E802)
Audio P.C. Board
Front P.C. Board
IC601
IC101
IC102
IC301
IC302
IC801
CB301
CB302
CB303
CB304
CB305
CB801
CB802
S301
S401
S402
S403
S404
S405
S406
S407
S408
S409
S410
S411
S412
S413
S414
S415
S416
S601
LCD401
LD401
LD402
LD403
LD404
LD405
LD406
PL401
PL403
PL405
PL407
PL409
VR401
VR101
VR301
D401
Q101
Q102
Q301
Q302
Q303
Q801
Q803
Q804
Q807
Q810
Q811
Q813
X601
CF101
①
②
③
④
⑤
※

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

Parts Layout on P.C. Boards and Wiring Diagram (2/3)

●7905E Model Only


Main P.C.Board
QRB Connector (E802)
To QRB Connector (E801)
Lug
BLK
SHLD
(ANT)
(ANT GND)
GRY (DIMMER)
BLU (IN MUTE)
YEL (IN REM)
RED (IN PAUSE)
GRN (OUT MUTE)
ORG (OUT REM)
BRN (OUT PAUSE)
BLU (R-GND)
GRN (F-GND)
YEL (R-L)
ORG (F-R)
RED (R-R)
BRN (F-R)
BLK (R-IN)
WHT (L-IN)
VIO (IN-GND)
YEL (POWER ANT)
RED (BAT)
ORG (GND)
BRN (IGN)
Mute P.C.Board
Audio P.C.Board
To Main P.C.Board (D.P)
Battery Lit (BA801)
To Main P.C.Board(DP)
IC201
IC501
IC601
IC602
S601
GRY
WHT
RED
YEL
ORG
GRN
BLU
BRN
Fron

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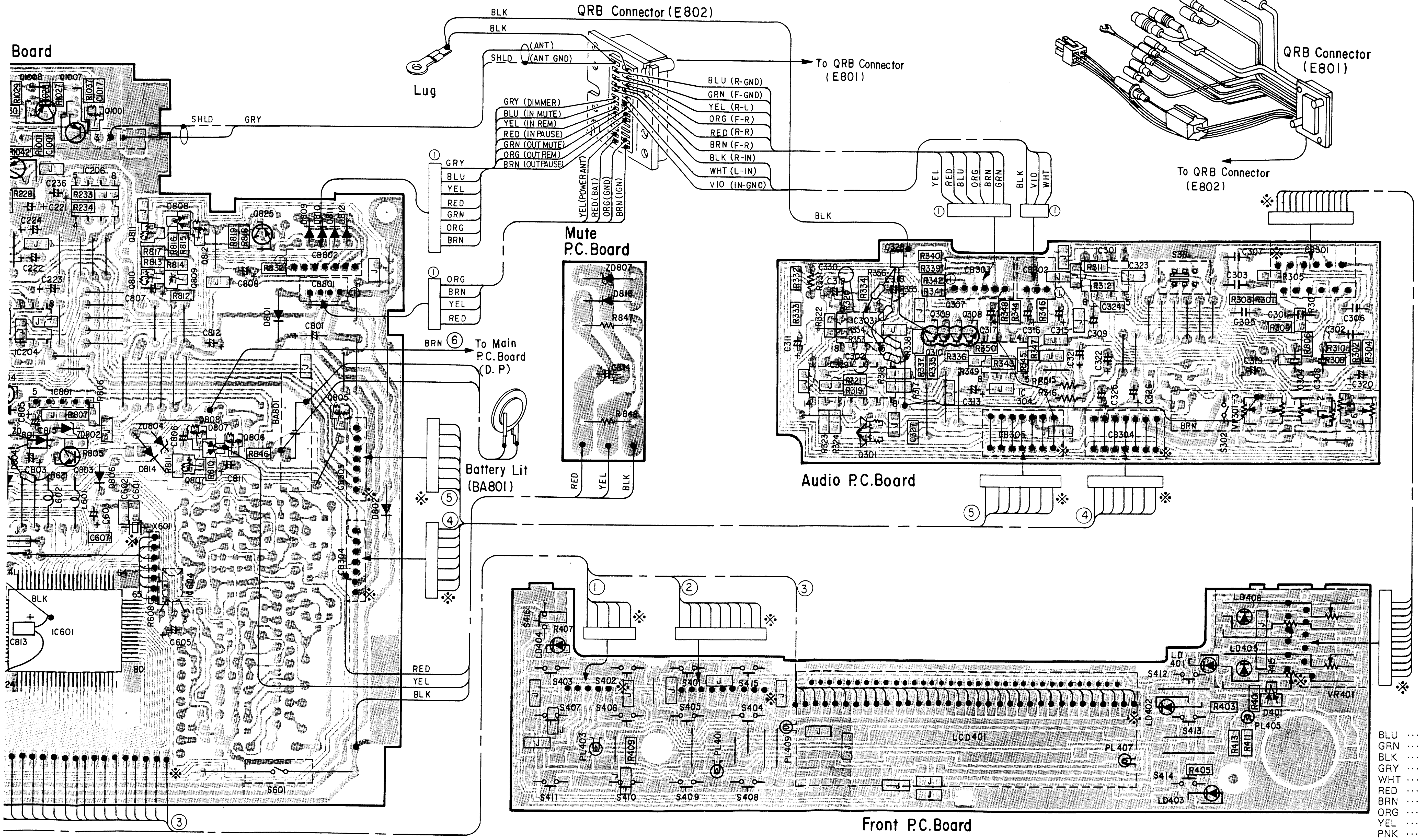
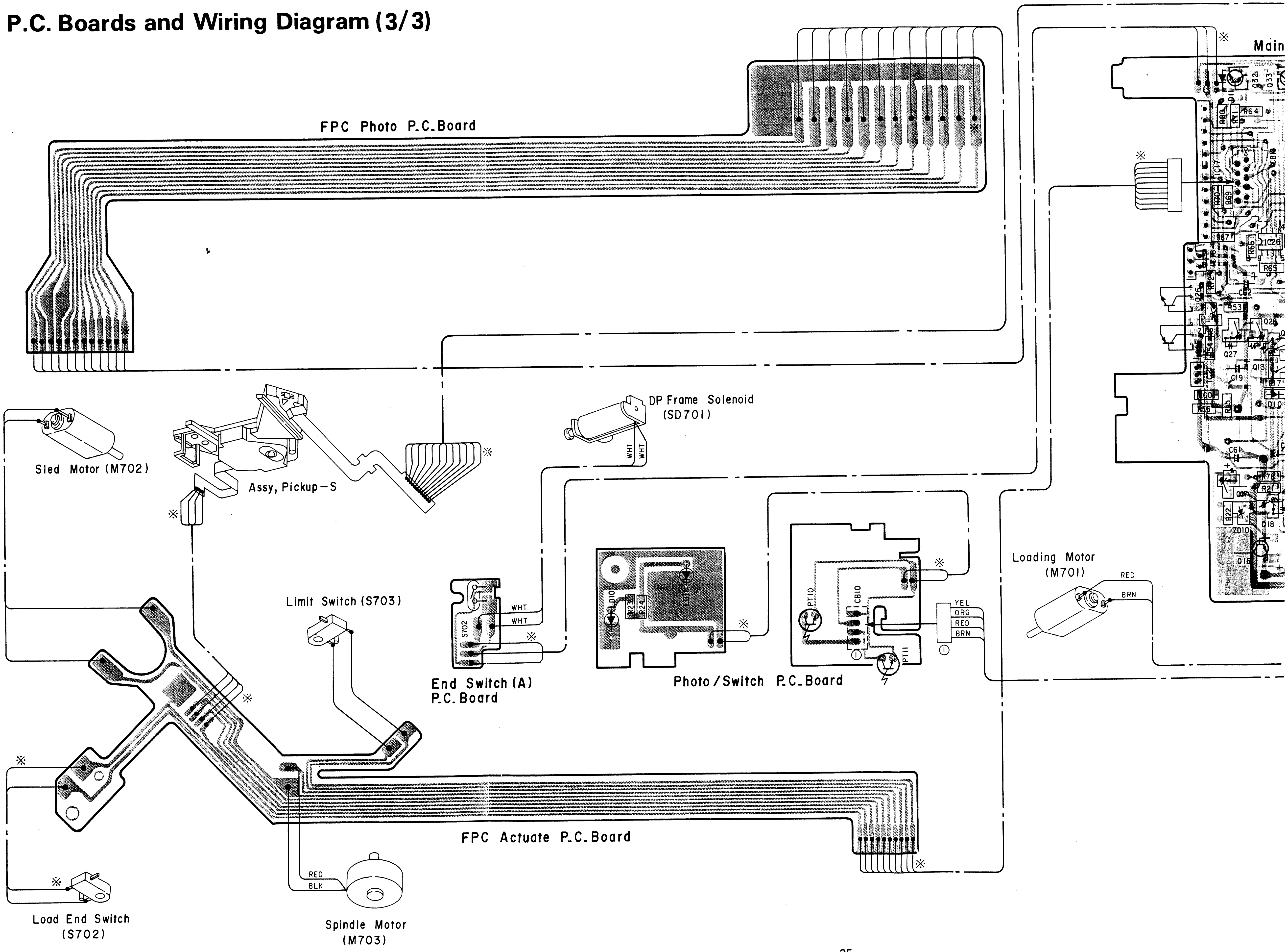
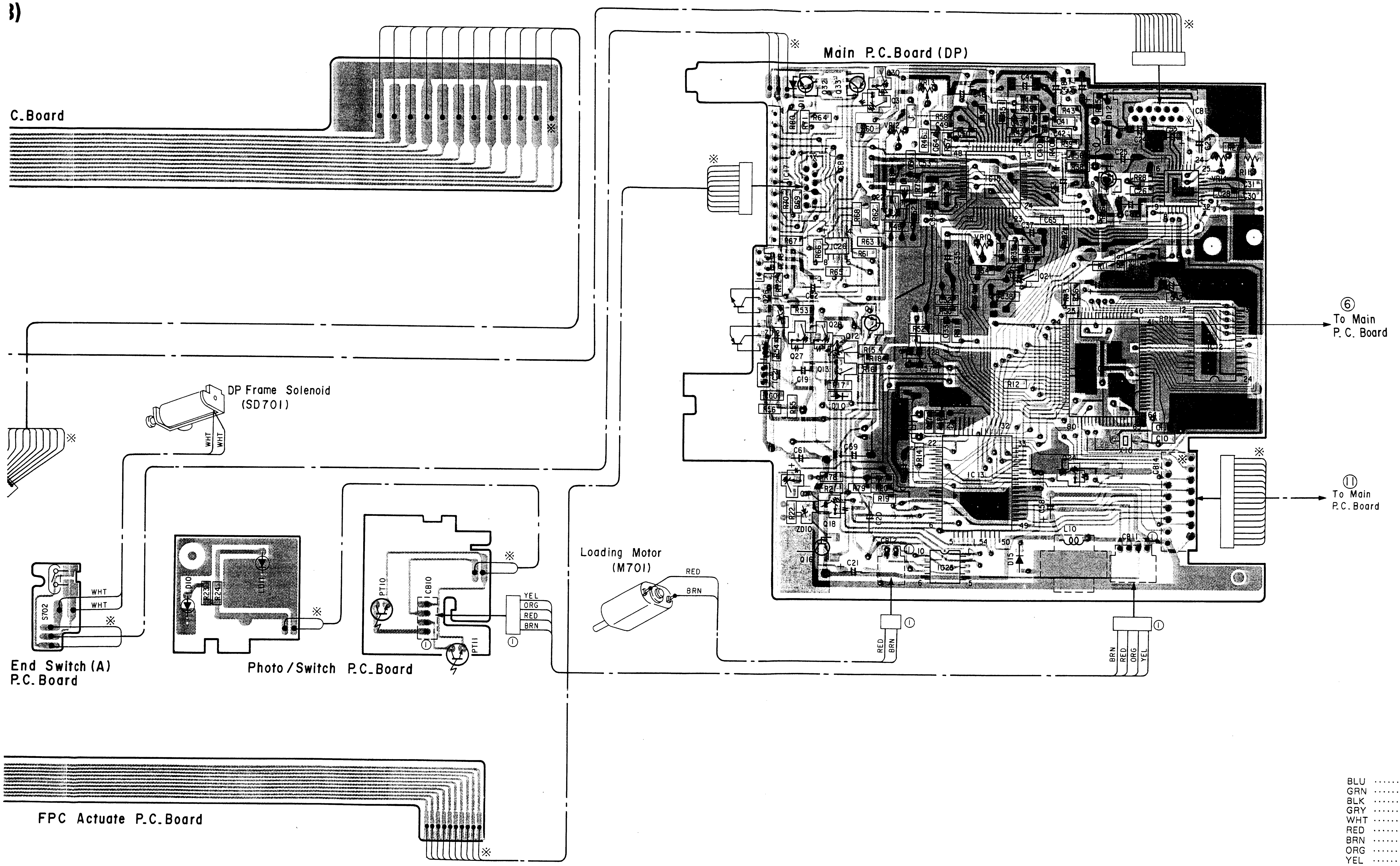

Board
QRB Connector (E802)
BLK
BLK
(ANT)
SHLD
(ANT GND)
Lug
To QRB Connector (E801)
BLU (R-GND)
GRN (F-GND)
YEL (R-L)
ORG (F-R)
RED (R-R)
BRN (F-R)
BLK (R-IN)
WHT (L-IN)
VIO (IN-GND)
GRY (DIMMER)
BLU (IN MUTE)
YEL (IN REM)
RED (IN PAUSE)
GRN (OUT MUTE)
ORG (OUT REM)
BRN (OUT PAUSE)
YEL (POWER ANT)
RED (BAT)
ORG (GND)
BRN (IGN)
SHLD
GRY
①
GRY
BLU
YEL
RED
GRN
ORG
BRN
ORG
BRN
YEL
RED
BRN ⑥ To Main P.C. Board (D.P)
Mute P.C. Board
ZD807
D816
R847
D814
R848
RED
YEL
BLK
Battery Lit (BA801)
⑤
④
QRB Connector (E801)
To QRB Connector (E802)
YEL
RED
BLU
ORG
BRN
GRN
BLK
VIO
WHT
①
BLK
Audio P.C. Board
⑤
④
①
②
③
Front P.C. Board
LCD401
VR401
S601
RED
YEL
BLK
IC601
IC206
IC204
IC801
CB801
CB802
CB304
CB305
CB301
CB302
CB303
CB304
CB305
IC301
IC303
IC304
S301
S302
VR301
Q301
Q307
Q308
Q309
Q310
BRN
S401
S402
S403
S404
S405
S406
S407
S408
S409
S410
S411
S412
S413
S414
S415
S416
LD401
LD402
LD403
LD404
LD405
LD406
D401
PL401
PL403
PL405
PL407
PL409
R403
R405
R407
R409
R411
R413
※
③

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

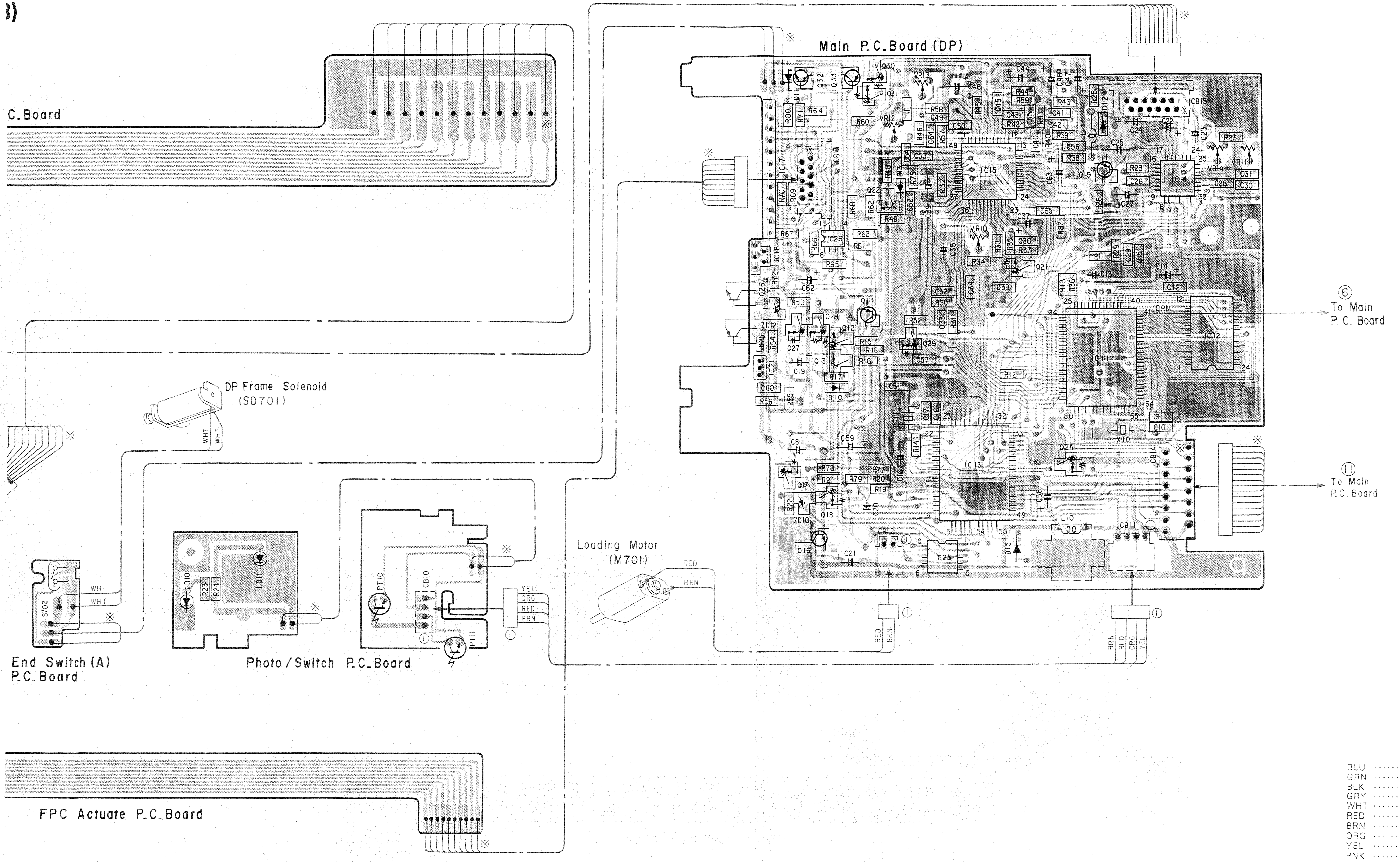
Parts Layout on P.C. Boards and Wiring Diagram (3/3)


FPC Photo P.C.Board
※
Main
Q32
Q33
R60
R71
R64
C17
R40
R69
R67
R66
IC26
R65
Q26
C62
R53
Q28
R54
Q27
Q13
C19
R55
R56
D10
C61
R78
R2
R22
ZD10
Q18
Q16
Sled Motor (M702)
Assy, Pickup-S
DP Frame Solenoid
(SD701)
WHT
WHT
Limit Switch (S703)
S702
WHT
WHT
End Switch (A)
P.C. Board
D10
R23
R24
PT10
CB10
PT11
YEL
ORG
RED
BRN
Photo/Switch P.C.Board
Loading Motor
(M701)
RED
BRN
FPC Actuate P.C.Board
Load End Switch
(S702)
RED
BLK
Spindle Motor
(M703)

3)


C. Board
※
Main P.C. Board (DP)
CB1
IC2
IC13
IC25
IC26
CB14
CB11
CB12
L10
X10
ZD10
VR10
VR12
40
41
BRN
12
24
22
32
35
49
50
54
5
6
10
⑥
To Main
P.C. Board
⑪
To Main
P.C. Board
DP Frame Solenoid
(SD701)
WHT
WHT
WHT
WHT
S702
End Switch (A)
P.C. Board
LD10
LD11
R23
R24
Photo/Switch P.C. Board
PT10
PT11
CB10
YEL
ORG
RED
BRN
Ⓘ
Loading Motor
(M701)
RED
BRN
RED
BRN
BRN
RED
ORG
YEL
FPC Actuate P.C. Board

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Ora
YEL	Yel.
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield


C.Board
Main P.C.Board (DP)
DP Frame Solenoid
(SD701)
WHT
WHT
End Switch (A)
P.C.Board
S702
Photo/Switch P.C.Board
LD10
LD11
R23
R24
PT10
PT11
CB10
YEL
ORG
RED
BRN
Loading Motor
(M701)
RED
BRN
FPC Actuate P.C.Board
⑥
To Main
P.C. Board
⑪
To Main
P.C. Board
CB15
CB14
CB11
CB12
CB13
IC12
IC13
IC14
IC15
IC17
IC18
IC21
IC25
IC26
X10
L10
VR10
VR11
VR12
VR13
VR14
※

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Ora
YEL	Yel.
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
uF=microfarads, pF=picofarads

Abbreviations

RES.=Resistor
C.F.=Carbon Film
M.F.=Metal Film
M.O.=Metal Oxide Film
M.P.=Metal Plate
TR.=Transistor
TRANS.=Transformer
CP.=Chip

CAP.=Capacitor
ELY.=Electrolytic
CER.=Ceramic
MYL.=Mylar
TAN.=Tantalum
POLY.=Polystyrol
PP.=Polypropylene
PLT.=Polyethylene

Symbol No.	Part No.	Description		
Main P. C. Board (D.P)				
IC's				
IC11	51T84719F02	CXD11350Q		
IC12	51T90640F01	CXK5816M		
or	51T84723F02	LC3516AML		
IC13	51T90390F02	90390F02		
or	51T92369F04	92369F04		
IC14	51T92280F01	CXA1081Q		
IC15	51T84119F01	CXA1082AQ		
IC17	51T92303F01	BA6291		
IC18	51T90889F01	LA6501		
IC21	51T90890F01	M5236ML		
IC25	51T92373F02	M54641		
IC26	51T92693F01	BA10358F		
or	51T93333F01	NJM2904M		
Transistors				
Q11	48T93351F01	CP., 2SB1073		
Q12	48T62967F03	CP., DTC124K		
Q13	48T81552F01	CP., 2SD1383K		
Q16	48T92368F01	2SD1760		
Q17	48T62966F03	CP., DTA124		
Q18	48T62967F03	CP., DTC124K		
Q19	48T80612F01	CP., 2SB1188		
Q21	48T62967F04	CP., DTC144K		
Q22	48T63417F01	CP., 2SC2412K		
Q24	48T62967F03	CP., DTC124K		
Q25	48T82870F01	2SB1172A		
Q26	48T74164F01	2SD1742		
Q27	48T62966F03	CP., DTA124		
Q28	48T62967F03	CP., DTC124K		
Q29	48T62967F04	CP., DTC144K		
Q30	48T62966F03	CP., DTA124		
Q31	48T62967F03	CP., DTC124K		
Q32	48T80615F01	CP., 2SD1766		
Q33	48T80612F01	CP., 2SB1188		

Symbol No.	Part No.	Description		
Diodes				
D10	48T90681F01	CP., MA110		
D11	48T74692F02	CP., MA291		
D12	48T90681F01	CP., MA110		
D13	48T90681F01	CP., MA110		
D15	48T74692F02	CP., MA291		
ZD10	48T62934F34	CP., Zener, RD8.2MB2		
ZD12	48T62934F47	CP., Zener, RD12MB3		
Coils/Crystal/Filter				
L10	25T47510F04	Choke Filter		
L11	24T51656F22	Inductor, 10 μ H		
X10	48T72757F01	Crystal, 8.4672MHz		
CF11	91T72630F01	CER., Filter, CSA2.00MG		
Capacitors				
C10	08S65128F19	CP., 22pF		
C11	08S65128F19	CP., 22pF		
C12	08S65128F69	CP., 0.01 μ F		
C13	23T74180F01	CP., ELY., 22 μ F/6.3V		
C14	23T74181F11	CP., T.T 1 μ F/10V		
C15	08S65128F69	CP., 0.01 μ F		
C16	23T74180F01	CP., ELY., 22 μ F/6.3V		
C17	08S65128F22	CP., 30pF		
C18	08S65128F22	CP., 30pF		
C19	23T74180F03	CP., ELY., 10 μ F/16V		
C20	23T74180F06	CP., ELY., 22 μ F/25V		
C21	23T74180F03	CP., ELY., 10 μ F/16V		
C22	23T74181F32	CP., T.T 6.8 μ F/6.3V		
C23	23T74180F05	CP., ELY., 4.7 μ F/25V		
C24	23T74181F11	CP., T.T 1 μ F/10V		
C25	23T74180F02	CP., ELY., 100 μ F/6.3V		
C26	08S65128F69	CP., 0.01 μ F		
C27	23T74181F33	CP., T.T 6.8 μ F/10V		
C28	08S53332F57	CP., 0.1 μ F		
C29	08T81833F04	CP., 0.47 μ F		
C30	08S65128F72	CP., 0.022 μ F		
C31	08S65128F73	CP., 0.033 μ F		
C32	08S65128F73	CP., 0.033 μ F		
C33	08T81833F04	CP., 0.47 μ F		
C34	08S65128F57	CP., 1000pF		

Symbol No.	Part No.	Description		
C35	23T74180F01	CP., ELY., 22 μ F/6.3V		
C36	08S65128F65	CP., 4700pF		
C37	23T74180F05	CP., ELY., 4.7 μ F/25V		
C38	08T81833F03	CP., 1 μ F		
C39	23T74181F33	CP., T.T 6.8 μ F/10V		
C40	08S65128F57	CP., 1000pF		
C41	08T81833F03	CP., 1 μ F		
C42	08S65128F76	CP., 0.1 μ F		
C43	08S65128F27	CP., 47pF		
C44	23T74181F33	CP., T.T 6.8 μ F/10V		
C45	08S53332F53	CP., 0.033 μ F		
C46	23T74180F05	CP., ELY., 4.7 μ F/25V		
C47	23T74180F01	CP., ELY., 22 μ F/6.3V		
C48	23T74180F01	CP., ELY., 22 μ F/6.3V		
C49	08S65128F76	CP., 0.1 μ F		
C50	08S65128F76	CP., 0.1 μ F		
C51	08S65128F69	CP., 0.01 μ F		
C52	08T81833F03	CP., 1 μ F		
C53	08S65128F61	CP., 2200pF		
C54	08S65128F74	CP., 0.047 μ F		
C55	08S65128F73	CP., 0.033 μ F		
C56	08S65128F69	CP., 0.01 μ F		
C57	08S53332F57	CP., 0.1 μ F		
C58	23C42170G30	CP., ELY., 470 μ F/16V		
C59	23T74180F06	CP., ELY., 22 μ F/25V		
C60	08S53332F57	CP., 0.1 μ F		
C61	23T74180F01	CP., ELY., 22 μ F/6.3V		
C62	23T74180F01	CP., ELY., 22 μ F/6.3V		
C63	23T74180F01	CP., ELY., 22 μ F/6.3V		
C64	08S65128F57	CP., 1000pF		
C65	08S53332F57	CP., 0.1 μ F		
Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)				
R11	06S64995F77	10k ohm		
R12	06S64996F02	100k ohm		
R13	06S64995F53	1k ohm		
R14	06S64996F02	100k ohm		
R15	06S64995F85	22k ohm		
R16	06S64995F77	10k ohm		
R17	06S64996F18	470k ohm		
R18	06T70072F53	1k ohm 1/4W		
R19	06S64996F10	220k ohm		
R20	06S64996F10	220k ohm		

Symbol No.	Part No.	Description		
R21	06S64995F93	47k ohm		
R22	06S64995F57	1.5k ohm		
R25	06S64995F53	1k ohm		
R26	06S64995F05	10 ohm		
R27	06S64995F85	22k ohm		
R28	06S64995F85	22k ohm		
R29	06S64996F02	100k ohm		
R30	06S64996F26	1M ohm		
R31	06S64995F84	20k ohm		
R32	06S64996F02	100k ohm		
R33	06S64995F66	3.6k ohm		
R34	06S64996F12	270k ohm		
R35	06S64995F77	10k ohm		
R36	06S64995F77	10k ohm		
R37	06S64996F02	100k ohm		
R38	06S64996F19	510k ohm		
R39	06S64995F81	15k ohm		
R40	06S64996F10	220k ohm		
R41	06S64996F02	100k ohm		
R42	06S64996F02	100k ohm		
R43	06S64996F02	100k ohm		
R44	06S64996F19	510k ohm		
R45	06S64996F02	100k ohm		
R46	06S64995F77	10k ohm		
R48	06S64996F26	1M ohm		
R49	06S64996F12	270k ohm		
R52	06S64995F77	10k ohm		
R53	06T70072F37	220 ohm 1/4W		
R54	06T70072F37	220 ohm 1/4W		
R55	06S64995F70	5.1k ohm		
R56	06S64995F81	15k ohm		
R57	06S64995F89	33k ohm		
R58	06S64996F02	100k ohm		
R59	06S64996F02	100k ohm		
R60	06S64995F81	15k ohm		
R61	06S64995F81	15k ohm		
R62	06S64995F81	15k ohm		
R63	06S64995F81	15k ohm		
R64	06S64995F81	15k ohm		
R65	06S64995F88	30k ohm		
R66	06S64995F88	30k ohm		
R67	06S64995F86	24k ohm		
R68	06S64995F88	30k ohm		
R69	06S64995F88	30k ohm		
R70	06S64995F88	30k ohm		
R71	06S64995F88	30k ohm		
R72	06S64995F88	30k ohm		
R75	06S64995F77	10k ohm		
R77	06S64995F93	47k ohm		
R78	06S64995F69	4.7k ohm		

Symbol No.	Part No.	Description		
R79	06S64995F61	2.2k ohm		
R80	06S64995F88	30k ohm		
R82	06S64995F77	10k ohm		
VR10	18T93996F07	Variable, 1k ohm		
VR11	18T93996F17	Variable, 47k ohm		
VR12	18T93996F15	Variable 22k ohm		
VR13	18T93996F15	Variable, 22k ohm		
VR14	18T93996F15	Variable, 22k ohm		

Photo P. C . Board

Photos/LEDs/Resistors

PT10	48T92913F01	Photo, PT360		
PT11	48T92913F01	Photo, PT360		
LD10	48T92912F01	LED, SLN-210RC (RED)		
LD11	48T92912F01	LED, SLN-210RC (RED)		
R23	06S53330F45	RES., CP., 470 ohm 1/8W		
R24	06S53330F45	RES., CP., 470 ohm 1/8W		

Main P. C. Board

IC's

■ IC101	51T94292F01	TDA1589		
■ IC102	51T69141F01	LA2220		
■ IC103	51T52383F01	NJM4558D		
IC201	51T92299F01	μ PD6355G		
IC202	51T15001W01	BA4560		
or	51T73718F02	NJM4560D		
IC203	51T68387F01	TC4052BP		
IC204	51T15001W01	BA4560		
or	51T73718F02	NJM4560D		
IC205	51T93222F01	M5236L		
IC206	51T15001W01	BA4560		
or	51T73718F02	NJM4560D		
IC207	51T15001W01	BA4560		
or	51T73718F02	NJM4560D		
IC501	51T94468F02	μ PD1722GH		
IC601	51T94923F03	94923F03		
or	51T94530F03	94530F03		
IC602	51T60226F01	TC4051BP		
IC603	51T47739F01	TC4066BP		
IC604	51T92166F01	S-8052ALR		
IC605	51T72309F01	MN1280		
IC801	51T74156F01	M51953BL		
IC1001	51T96030F01	μ PC1675G		

Symbol No.	Part No.	Description		

Transistors

■ Q102	48T73888F08	CP., FMG1		
■ Q103	48T90179F03	2SD1991		
■ Q104	48T94582F01	CP., 2SC4081		
Q201	48T94606F05	CP., DTC114TU		
Q202	48T94606F05	CP., DTC114TU		
Q203	48T94606F03	CP., DTC124EU		
■ Q204	48T94606F03	CP., DTC124EU		
Q205	48T70213F01	2SB911M		
● Q206	48S40627U04	2SD636		
■ Q206	48T90179F03	2SD1991		
■ Q501	48T94606F03	CP., DTC124EU		
Q601	48T94581F01	CP., 2SA1576		
Q602	48T94606F05	CP., DTC114TU		
● Q603	48T73888F08	CP., FMG1		
Q803	48S42455F02	2SD638		
Q804	48S42455F02	2SD638		
Q805	48T94606F53	CP., DTA124EU		
Q806	48T94606F03	CP., DTC124EU		
Q807	48T94606F56	CP., DTA114EU		
Q808	48T94606F03	CP., DTC124EU		
Q809	48T94581F01	CP., 2SA1576		
Q810	48T94606F03	CP., DTC124EU		
Q811	48T94606F03	CP., DTC124EU		
Q812	48T94606F03	CP., DTC124EU		
■ Q813	48T94606F03	CP., DTC124EU		
Q814	48T80055F01	2SD1189		
Q819	48T47866F02	2SB644		
Q820	48T73888F08	CP., FMG1		
■ Q824	48T94606F03	CP., DTC124EU		
Q825	48T70213F01	2SB911M		
Q1001	48T94606F03	CP., DTC124EU		
Q1002	48T42182U01	2SD661		
Q1003	48T42182U01	2SD661		
■ Q1004	48T94606F03	CP., DTC124EU		
Q1006	48T94606F03	CP., DTC124EU		
Q1007	48T47866F02	2SB644		
Q1008	48T47866F02	2SB644		
Q1009	48T94606F03	CP., DTC124EU		
Q1010	48T52549F02	2SD973A		
● Q1011	48T94606F03	CP., DTC124EU		
● Q1013	48T94606F03	CP., DTC124EU		
Q1014	48T94606F03	CP., DTC124EU		

Diodes

■ D2	48T94608F02	CP., DAP202M		
■ D102	48T44813F01	MA165TA		
■ or	48T68828F01	1SS133		
D602	48T44813F01	MA165TA		
or	48T68828F01	1SS133		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
D603	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D604	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
■ D605	48T44813F01	MA165TA		
■ or	48T68828F01	1SS133		
D606	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
■ D607	48T44813F01	MA165TA		
■ or	48T68828F01	1SS133		
● D608	48T44813F01	MA165TA		
● or	48T68828F01	1SS133		
D609	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D610	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D611	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D612	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D613	48T90681F01	CP., MA110		
D614	48T90681F01	CP., MA110		
D615	48T90681F01	CP., MA110		
D616	48T90681F01	CP., MA110		
D617	48T44813F02	MA165		
D801	48C40235G02	10E2		
D802	48C40235G02	10E2		
D804	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D805	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
D806	48T44813F01	MA165TA		
or	48T68828F01	1SS133		
■ D806	48T44813F01	MA165TA		
■ or	48T68828F01	1SS133		
D807	48T94608F03	CP., DAN202U		
D808	48T94608F01	CP., DA204U		
D809	48C40235G02	10E2		
D810	48C40235G02	10E2		
D811	48C40235G02	10E2		
D812	48C40235G02	10E2		
■ D813	48C40235G02	10E2		
D814	48C40235G02	10E2		
● D815	48T44813F01	MA165TA		
■ D815	48T44813F02	MA165		
D1001	48T94608F03	CP., DAN202U		
■ ZD101	48T83128F22	Zener, HZS9B1L		
ZD201	48T83128F12	Zener, HZS7A3L		
ZD601	48T68697F20	Zener, HZS5.6EB1		
ZD602	48T68697F20	Zener, HZS5.6EB1		

Symbol No.	Part No.	Description		
ZD801	48T83128F09	Zener, HZS6C3L		
ZD802	48T91071F12	Zener, HZS5CLL		
ZD803	48T83128F03	Zener, HZS6A3L		
ZD804	48T68697F01	Zener, HZS2.7EB1		
ZD805	48T83128F25	Zener, HZS9C1L		
■ ZD807	48T68697F01	Zener, HZS2.7EB1		
ZD1001	48T83128F25	Zener, HZS9C1L		
ZD1002	48T68697F09	Zener, HZS3.9EB1		
ZD1003	48T83128F25	Zener, HZS9C1L		
Coils／Switch／Crystals／Filter				
L601	24T50508F22	Inductor, 10 μ H		
L602	24T50508F22	Inductor, 10 μ H		
■ L603	24T51656F22	Inductor, 10 μ H		
L801	24T50508F22	Inductor, 10 μ H		
S601	40T72772F01	Switch, TR−80B10FA		
X501	48T67096F01	Crystal, 4.5MHz		
X601	91T92651F01	Crystal, CER., Lock, 4.19MHz		
■ CF101	91T69142F01	CER., Filter, 456F13		
Capacitors				
■ C102	23S65123F29	ELY., 1 μ F／50V		
■ C103	08S65128F65	CP., 4700pF		
■ C104	23S61523F12	ELY., 10 μ F／16V		
■ C105	08S60102F28	CP., 0.047 μ F		
■ C106	23S61523F25	ELY., 0.1 μ F／50V		
■ C107	23S61523F35	ELY., 0.68 μ F／50V		
■ C108	23T74437F32	TAN., 10 μ F／16V		
■ C109	23S65123F34	ELY., 100 μ F／10V		
■ C110	08T57705F55	MYL., 1000pF		
■ C111	08T42629F55	MYL., 1000pF		
■ C112	08T42629F59	MYL., 2200pF		
■ C113	23S65123F34	ELY., 100 μ F／10V		
■ C114	23S61523F09	ELY., 22 μ F／10V		
■ C115	08T42629F77	MYL., 0.068 μ F		
■ C116	23S61523F17	ELY., 4.7 μ F／25V		
■ C117	08S65128F43	CP., 220pF		
■ C118	23S61523F17	ELY., 4.7 μ F／25V		
■ C119	08T57705F77	MYL., 0.068 μ F		
■ C120	08T57705F77	MYL., 0.068 μ F		
■ C121	23S65123F12	ELY., 10 μ F／16V		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
■ C122	23S65123F12	ELY., 10 μ F／16V		
■ C123	23S65123F12	ELY., 10 μ F／16V		
■ C124	23S65123F12	ELY., 10 μ F／16V		
■ C125	23S61523F10	ELY., 33 μ F／10V		
■ C126	23S61523F09	ELY., 22 μ F／10V		
■ C127	08S65128F74	CP., 0.047 μ F		
C201	23T74437F32	TAN., 10 μ F／16V		
● C202	23S57422F11	ELY., 22 μ F／16V		
■ C202	23S61523F09	ELY., 22 μ F／10V		
C203	23S61523F09	ELY., 22 μ F／10V		
C204	23T74437F32	TAN., 10 μ F／16V		
● C205	08T72783F19	CP., 47pF		
■ C205	08T82122F29	CP., 47pF		
● C206	08T72783F19	CP., 47pF		
■ C206	08T82122F29	CP., 47pF		
C207	23T82372F08	ELY., 10 μ F／16V (B.P.)		
C208	23T82372F08	ELY., 10 μ F／16V (B.P.)		
C209	08T72783F38	CP., 1800pF		
C210	08T72783F38	CP., 1800pF		
● C211	08T72783F23	CP., 100pF		
■ C211	08T82122F37	CP., 100pF		
● C212	08T72783F23	CP., 100pF		
■ C212	08T82122F37	CP., 100pF		
● C213	23S57422F09	ELY., 10 μ F／16V		
■ C213	23S61523F12	ELY., 10 μ F／16V		
● C215	08T50579F01	T.F., 0.01 μ F		
■ C215	08T90316F17	T.F., 0.01 μ F		
C216	08T50579F01	T.F., 0.01 μ F		
● C217	08T72783F28	CP., 270pF		
■ C217	08T82122F47	CP., 270pF		
● C218	08T72783F28	CP., 270pF		
■ C218	08T82122F47	CP., 270pF		
C221	23S61523F28	ELY., 0.47 μ F／50V		
C222	23S61523F34	ELY., 100 μ F／10V		
C223	23S61523F12	ELY., 10 μ F／16V		
● C224	23S41059P26	TAN., 10 μ F／16V		
■ C224	23T74437F32	TAN., 10 μ F／16V		
C225	23S57422F09	ELY., 10 μ F／16V		
C226	23S57422F09	ELY., 10 μ F／16V		
C227	08S65128F47	CP., 330pF		
C228	08S65128F47	CP., 330pF		
C229	08S65128F56	CP., 820pF		
C230	08S65128F56	CP., 820pF		
C231	23S61523F29	ELY., 1 μ F／50V		
C232	23S57422F05	ELY., 1 μ F／50V		
C234	23T43247F05	ELY., 1 μ F／50V		
C236	23S61523F34	ELY., 100 μ F／10V		

Symbol No.	Part No.	Description		
● C237	21C45322G14	CER., 22pF		
■ C237	08S65128F19	CP., 22pF		
● C238	21C45322G14	CER., 22pF		
■ C238	08S65128F19	CP., 22pF		
C501	08S65128F19	CP., 22pF		
C502	08S65128F19	CP., 22pF		
C503	23S61523F34	ELY., 100 μ F／10V		
C504	08S65128F69	CP., 0.01 μ F		
C505	08S65128F35	CP., 100pF		
● C506	08S65128F35	CP., 100pF		
■ C506	08S53332F23	CP., 100pF		
C507	08S65128F35	CP., 100pF		
C508	08S65128F35	CP., 100pF		
C509	08S65128F35	CP., 100pF		
C601	08S65128F22	CP., 30pF		
C602	08S65128F22	CP., 30pF		
C603	23S61523F34	ELY., 100 μ F／10V		
C605	23S57422F09	ELY., 10 μ F／16V		
C607	08S65128F69	CP., 0.01 μ F		
C801	23T51232F02	ELY., 1000 μ F／16V		
C803	23S61523F29	ELY., 1 μ F／50V		
C805	23S61523F25	ELY., 0.1 μ F／50V		
C806	23T82372F10	ELY., (B.P.) 3.3 μ F／25V		
C807	23S61523F12	ELY., 10 μ F／16V		
C808	23S61523F12	ELY., 10 μ F／16V		
■ C810	23S92017F03	ELY., 100 μ F／16V		
C811	23T92017F03	ELY., 100 μ F／16V		
C812	23T92017F03	ELY., 100 μ F／16V		
C813	23S41059P18	TAN., 4.7 μ F／16V		
■ C814	23S61523F14	ELY., 33 μ F／16V		
● C815	23S41059P08	TAN., 1 μ F／35V		
■ C815	23S65123F29	ELY., 1 μ F／50V		
C1001	08S65128F69	CP., 0.01 μ F		
C1002	08S65128F69	CP., 0.01 μ F		
C1003	23T82372F19	ELY., (B.P.) 2.2 μ F／50V		
C1004	08S65128F69	CP., 0.01 μ F		
■ C1005	23S61523F27	ELY., 0.33 μ F／50V		
C1006	08S65128F69	CP., 0.01 μ F		
C1007	23S92017F01	ELY., 220 μ F／10V		
C1008	08S65128F57	CP., 1000pF		
C1009	08S65128F57	CP., 1000pF		
C1010	08S65128F57	CP., 1000pF		
C1011	08S65128F69	CP., 0.01 μ F		
C1012	08S65128F57	CP., 1000pF		
C1013	23S61523F25	ELY., 0.1 μ F／50V		
● C1014	08T44979P10	CER., 0.022 μ F		
■ C1014	08S53332F51	CP., 0.022 μ F		
C1015	08S65128F69	CP., 0.01 μ F		
C1016	23S57422F15	ELY., 47 μ F／10V		
C1017	08S65128F69	CP., 0.01 μ F		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
C1019	08S53332F49	CP., 0.015 μF		
C1020	08S53332F49	CP., 0.015 μF		
● C1021	23S67422F11	ELY., 22 μF/16V		
■ C1021	23S61523F09	ELY., 22 μF/10V		
C1022	08S65128F69	CP., 0.01 μF		
● C1023	08S53332F17	CP., 33pF		
■ C1023	08S65128F23	CP., 33pF		
Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)				
■ R106	06S64996F02	100k ohm		
■ R107	06S64995F53	1k ohm		
■ R108	06S64995F65	3.3k ohm		
■ R109	06S64995F69	4.7k ohm		
■ R110	06S64995F05	10 ohm		
■ R111	06S64995F59	1.8k ohm		
■ R112	06S64995F34	160 ohm		
■ R113	06S64995F93	47k ohm		
■ R114	06S64995F84	20k ohm		
■ R116	06S64996F10	220k ohm		
■ R117	06S64995F53	1k ohm		
■ R118	06S64995F93	47k ohm		
■ R119	06S64995F53	1k ohm		
■ R120	06S64995F53	1k ohm		
■ R121	06S64995F45	470 ohm		
■ R122	06S64996F22	680k ohm		
■ R123	06S64995F61	2.2k ohm		
■ R124	06S64995F53	1k ohm		
■ R125	06S53330F93	47k ohm 1/8W		
■ R126	06S64995F93	47k ohm		
■ R127	06S64995F53	1k ohm		
■ R128	06S64996F26	1M ohm		
■ R129	06S64995F95	56k ohm		
■ R130	06S64996F02	100k ohm		
■ R131	06S64995F71	5.6k ohm		
■ R132	06S64996F09	200k ohm		
■ R133	06S64995F85	22k ohm		
■ R134	06S64996F26	1M ohm		
● R201	06S53330F69	4.7k ohm 1/8W		
■ R201	06S64995F69	4.7k ohm		
R203	06S64995F81	15k ohm		
R204	06S64995F81	15k ohm		
R205	06S64995F81	15k ohm		
R206	06S64995F81	15k ohm		
R207	06S64995F81	15k ohm		
R208	06S64995F81	15k ohm		
R209	06S64995F66	3.6k ohm		
R210	06S64995F66	3.6k ohm		
R211	06S64995F57	1.5k ohm		
R212	06S64995F57	1.5k ohm		

Symbol No.	Part No.	Description		
R213	06S64996F18	470k ohm		
R214	06S64996F18	470k ohm		
R215	06S64995F87	27k ohm		
R216	06S64995F87	27k ohm		
R217	06S64995F85	22k ohm		
■ R218	06S64995F85	22k ohm		
R220	06S53331F02	100k ohm 1/8W		
● R221	06S64995F80	13k ohm		
■ R221	06S64995F74	7.5k ohm		
● R222	06S64995F80	13k ohm		
■ R222	06S64995F74	7.5k ohm		
R223	06S64996F02	100k ohm		
R224	06S64996F02	100k ohm		
R225	06S64995F89	33k ohm		
R226	06S64995F89	33k ohm		
R229	06S64995F37	220 ohm		
R230	06S64995F81	15k ohm		
R231	06S64995F87	27k ohm		
R232	06S64995F69	4.7k ohm		
R233	06S64995F76	9.1k ohm		
R234	06S64995F77	10k ohm		
R235	06S64995F41	330 ohm		
R237	06S64995F93	47k ohm		
R238	06S64995F93	47k ohm		
R239	06S64995F83	18k ohm		
R240	06S64995F83	18k ohm		
R241	06S64996F02	100k ohm		
R242	06S64996F02	100k ohm		
■ R243	06S64996F02	100k ohm		
■ R244	06S64996F02	100k ohm		
■ R277	06S64996F02	100k ohm		
R501	06S64995F93	47k ohm		
R503	06S64995F93	47k ohm		
■ R504	06S53330F77	10k ohm 1/8W		
■ R506	06S53330F77	10k ohm 1/8W		
■ R507	06S64995F77	10k ohm		
R508	06S64995F77	10k ohm		
R509	06S64995F77	10k ohm		
● R510	06S64995F77	10k ohm		
R601	06S64995F61	2.2k ohm		
R602	06S64995F85	22k ohm		
R603	06S64995F85	22k ohm		
R604	06S64995F85	22k ohm		
R608	06S64995F69	4.7k ohm		
R609	06S64996F02	100k ohm		
● R613	06S64995F85	22k ohm		
● R614	06S64995F85	22k ohm		
● R615	06S53331F02	100k ohm 1/8W		
■ R615	06S64996F02	100k ohm		
● R616	06S53331F02	100k ohm 1/8W		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
■ R616	06S64996F02	100k ohm		
R617	06S64996F02	100k ohm		
■ R621	06S53330F69	4.7k ohm 1／8W		
■ R635	06S64995F53	1k ohm		
R805	06S64995F65	3.3k ohm		
R806	06S64995F69	4.7k ohm		
R807	06S64996F02	100k ohm		
R809	06S64995F77	10k ohm		
R810	06S64995F85	22k ohm		
R811	06S64995F53	1k ohm		
R812	06S64995F85	22k ohm		
R813	06S64995F61	2.2k ohm		
R814	06S64995F77	10k ohm		
R815	06T70072F80	2.7 ohm 1／4W		
R816	06T70072F80	2.7 ohm 1／4W		
R817	06S64995F77	10k ohm		
R818	06S64995F77	10k ohm		
R819	06S64995F61	2.2k ohm		
■ R820	06S64995F69	4.7k ohm		
R822	06T70072F45	470 ohm 1／4W		
R823	06T70072F21	47 ohm 1／4W		
R824	06T70072F21	47 ohm 1／4W		
R830	06T70072F21	47 ohm 1／4W		
R831	06T70072F21	47 ohm 1／4W		
R832	06S64995F77	10k ohm		
R833	06S64995F77	10k ohm		
R834	06S64995F61	2.2k ohm		
R835	06T70072F53	1k ohm 1／4W		
■ R840	06S64995F61	2.2k ohm		
■ R842	06S64995F61	2.2k ohm		
R844	06T70072F21	47 ohm 1／4W		
R845	06T70072F21	47 ohm 1／4W		
R846	06S53330F77	10k ohm 1／8W		
■ R847	06S64995F77	10k ohm		
■ R848	06S64996F02	100k ohm		
■ R849	06S64995F85	22k ohm		
R1001	06S64995F53	1k ohm		
R1002	06S64995F65	3.3k ohm		
R1003	06S64995F05	10 ohm		
R1004	06S64995F65	3.3k ohm		
R1005	06S64995F53	1k ohm		
R1007	06S64995F57	1.5k ohm		
R1008	06S64995F71	5.6k ohm		
R1009	06S64995F41	330 ohm		
R1010	06S64995F61	2.2k ohm		
R1011	06S64995F61	2.2k ohm		
R1012	06S64995F61	2.2k ohm		
● R1014	06S64995F05	10 ohm		
■ R1014	06S64995F17	33 ohm		

Symbol No.	Part No.	Description		
R1015	06S64995F53	1k ohm		
R1017	06S64995F73	6.8k ohm		
R1018	06S64995F73	6.8k ohm		
■ R1019	06S64995F81	15k ohm		
● R1019	06S64995F77	10k ohm		
■ R1020	06S64995F81	15k ohm		
● R1020	06S64995F77	10k ohm		
R1021	06S64996F02	100k ohm		
R1022	06S64996F02	100k ohm		
R1027	06S64995F65	3.3k ohm		
R1028	06S64995F65	3.3k ohm		
R1029	06S64995F65	3.3k ohm		
R1030	06T70072F53	1k ohm 1／4W		
R1031	06T70072F53	1k ohm 1／4W		
R1035	06S64995F77	10k ohm		
● R1036	06S64995F77	10k ohm		
■ R1036	06S64995F73	6.8k ohm		
R1037	06S64995F53	1k ohm		
● R1039	06S64995F53	1k ohm		
● R1042	06S64995F15	27 ohm		
■ R1042	06S64995F27	82 ohm		
R1043	06S64995F29	100 ohm		
R1044	06S64995F93	47k ohm		
R1045	06S64995F93	47k ohm		
■ R1046	06S53331F26	1M ohm 1／8W		
R6001	06T74182F07	Block, 47k ohm x 9		
R6002	06T74182F03	Block, 100k ohm x 4		
■ VR101	18T42748F01	Variable, 100 ohm		

Audio P. C. Board

IC's

IC301	51T73718F02	NJM4560D		
IC302	51T47739F01	TC4066BP		
IC303	51T73718F02	NJM4560D		
IC304	51T73718F02	NJM4560D		

Transistors／Switch

Q301	48T73888F08	CP., FMG1		
■ Q303	48T63788F04	CP., 2SD1328		
■ Q304	48T63788F04	CP., 2SD1328		
Q307	48T57337F03	2SD1330		
Q308	48T57337F03	2SD1330		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
Q309	48T57337F03	2SD1330		
Q310	48T57337F03	2SD1330		
S301	40T68063F01	Switch, SSJ−322A (TONE BYPASS)		
Capacitors				
● C301	08T42629F28	MYL., 0.082 μ F		
■ C301	08T57705F28	MYL., 0.082 μ F		
● C302	08T42629F28	MYL., 0.082 μ F		
■ C302	08T57705F28	MYL., 0.082 μ F		
● C303	08T42629F31	MYL., 0.15 μ F		
■ C303	08T57705F31	MYL., 0.15 μ F		
● C304	08T42629F31	MYL., 0.15 μ F		
■ C304	08T57705F31	MYL., 0.15 μ F		
● C305	08T44481F01	PP., 330pF		
■ C305	08T52448F01	PP., 330pF		
● C306	08T44481F01	PP., 330pF		
■ C306	08T52448F01	PP., 330pF		
● C307	08T44481F03	PP., 390pF		
■ C307	08T52448F03	PP., 390pF		
● C308	08T44481F03	PP., 390pF		
■ C308	08T52448F03	PP., 390pF		
C309	23S61524F13	ELY., 10 μ F/16V		
● C310	23S61524F12	ELY., 10 μ F/16V		
■ C310	23S61523F12	ELY., 10 μ F/16V		
C311	23S61523F12	ELY., 10 μ F/16V		
C312	23S61523F12	ELY., 10 μ F/16V		
● C313	23T43247F09	ELY., 10 μ F/16V		
■ C313	23S61524F13	ELY., 10 μ F/16V		
C315	23S61524F13	ELY., 10 μ F/16V		
C316	23S61524F13	ELY., 10 μ F/16V		
C317	23S61524F13	ELY., 10 μ F/16V		
C319	23S61524F13	ELY., 10 μ F/16V		
C320	23S61524F13	ELY., 10 μ F/16V		
C321	23S61524F18	ELY., 4.7 μ F/25V		
C322	23S61524F18	ELY., 4.7 μ F/25V		
C323	08S65128F17	CP., 18pF		
C324	08S65128F17	CP., 18pF		
● C325	23T43247F09	ELY., 10 μ F/16V		
■ C325	23S61524F13	ELY., 10 μ F/16V		
C326	23S61524F13	ELY., 10 μ F/16V		
C327	08S65128F69	CP., 0.01 μ F		
C328	23S57422F09	ELY., 10 μ F/16V		
● C329	21C45322G10	CER., 10pF		
■ C329	08S65128F12	CP., 10pF		
● C330	21C45322G10	CER., 10pF		
■ C330	08S65128F12	CP., 10pF		

Symbol No.	Part No.	Description		
Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)				
R301	06S64995F71	5.6k ohm		
R302	06S64995F71	5.6k ohm		
R303	06S64995F71	5.6k ohm		
R304	06S64995F71	5.6k ohm		
R305	06S64995F91	39k ohm		
R306	06S64995F91	39k ohm		
R307	06S64995F71	5.6k ohm		
R308	06S64995F71	5.6k ohm		
R309	06S64995F71	5.6k ohm		
R310	06S64995F71	5.6k ohm		
R311	06S64996F26	1M ohm		
R312	06S64996F26	1M ohm		
■ R315	06S64995F68	4.3k ohm		
■ R316	06S64995F68	4.3k ohm		
R317	06S53331F02	100k ohm 1/8W		
R318	06S53331F02	100k ohm 1/8W		
R319	06S64995F89	33k ohm		
R320	06S64995F89	33k ohm		
R321	06S64996F02	100k ohm		
R322	06S64996F02	100k ohm		
R323	06S64995F61	2.2k ohm		
R324	06S64995F85	22k ohm		
■ R325	06S64995F61	2.2k ohm		
■ R326	06S64995F61	2.2k ohm		
■ R331	06S64995F53	1k ohm		
● R332	06S53330F53	1k ohm 1/8W		
■ R332	06S64995F53	1k ohm		
● R333	06S64995F53	1k ohm		
■ R333	06S53330F53	1k ohm 1/8W		
● R334	06S64995F53	1k ohm		
R335	06S64995F69	4.7k ohm		
R336	06S64995F69	4.7k ohm		
R337	06S64995F69	4.7k ohm		
R338	06S64995F69	4.7k ohm		
R339	06S53330F29	100 ohm 1/8W		
R340	06S53330F29	100 ohm 1/8W		
R341	06S53330F29	100 ohm 1/8W		
R342	06S53330F29	100 ohm 1/8W		
R343	06S64995F70	5.1k ohm		
● R344	06S53330F70	5.1k ohm 1/8W		
■ R344	06S64995F70	5.1k ohm		
R345	06S64995F70	5.1k ohm		
R346	06S64995F70	5.1k ohm		
● R347	06S64995F70	5.1k ohm		
■ R347	06S53330F70	5.1k ohm 1/8W		
R348	06S64995F70	5.1k ohm		
R349	06S64995F70	5.1k ohm		
R350	06S64995F70	5.1k ohm		
■ R353	06S64995F68	4.3k ohm		
■ R354	06S64995F68	4.3k ohm		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Symbol No.	Part No.	Description		
■ R355	06S64995F89	33k ohm		
■ R356	06S64995F89	33k ohm		
VR301 S302	18T94013F02	Volume Control (VOLUME, BALANCE, FADER, POWER)		

Mute P. C. Board

Diodes/Capacitor

Symbol No.	Part No.	Description		
● D816	48T44813F02	Diode, MA165		
● ZD807	48T68697F01	Diode, Zener, HZS2.7EB1		
● C814	23S61523F14	ELY., 33 μ F/16V		

Front P. C. Board

Diodes/LEDs

Symbol No.	Part No.	Description		
D401	48T63462F01	CP., DAN202K		
LD401	48T72180F01	LED, (GRN/ORG)		
LD402	48T72180F01	LED, (GRN/ORG)		
LD403	48T72180F01	LED, (GRN/ORG)		
LD404	48T72180F01	LED, (GRN/ORG)		

Switches

Symbol No.	Part No.	Description		
S401	40T70366F01	Tact, KHL−10906 (LO/DX)		
S402	40T70366F01	Tact, KHL−10906 (D.A.P.)		
S403	40T70366F01	Tact, KHL−10906 (EJECT)		
S404	40T70366F01	Tact, KHL−10906 (1/CLEAR)		
S405	40T70366F01	Tact, KHL−10906 (2/PRESET)		
S406	40T70366F01	Tact, KHL−10906 (3/P.S.P.)		
S407	40T70366F01	Tact, KHL−10906 (TUNER/BAND)		
S408	40T70366F01	Tact, KHL−10906 (4/REPEAT)		
S409	40T70366F01	Tact, KHL−10906 (5/SCAN)		
S410	40T70366F01	Tact, KHL−10906 (6/M.I.X.)		
S411	40T70366F01	Tact, KHL−10906 (DISK/▶▶/❚❚)		
S412	40T70366F01	Tact, KHL−10906 (TUNE/DISP)		
S413	40T70366F01	Tact, KHL−10906 (⏭ /UP)		
S414	40T70366F01	Tact, KHL−10906 (⏮ /DOWN)		
S415	40T70366F01	Tact, KHL−10906 (MONO)		

Symbol No.	Part No.	Description		
S416	40T70366F01	Tact, KHL−10906 (RESET)		

Lamps

Symbol No.	Part No.	Description		
PL401	65T95274F02	Pilot, 6V−70mA		
PL403	65T95274F02	Pilot, 6V−70mA		
PL405	65T80297F05	Pilot, 6V−65mA		
PL407	65T95083F01	Pilot, 6.7V−85mA		
PL409	65T95083F01	Pilot, 6.7V−85mA		

Resistors (All resistors are chip 1/4W±5% unless otherwise noted.)

Symbol No.	Part No.	Description		
R401	06T70072F49	680 ohm		
R403	06T70072F49	680 ohm		
R405	06T70072F49	680 ohm		
R407	06T70072F49	680 ohm		
R409	06T70072F17	33 ohm		
R411	06T70072F26	75 ohm		
R413	06T70072F26	75 ohm		
R415	06T70072F47	560 ohm		
VR401 LD405 LD406	18T93886F03	Volume, Slide, 100k ohm B × 2 (GRN) (TREBLE/BASS)		

Miscellaneous

Symbol No.	Part No.	Description		
BA801	60T83249F01	Battery, Lit (BR2032)		
or	60T91060F03	Battery, Lit (CR2032)		
E802	01T94604F01	Assy., QRB Connector		
HD201	88T90878F01	Pickup Unit		
LCD401	65T93597F01	LCD Display (LU1404)		
M701	01V91700F04	Assy., Motor Loading		
M702	59T90879F01	Motor, SLED		
M703	59T91005F01	Motor, Spindle		
S701	40T71025F03	Switch, Detector		
S702	40T71025F01	Switch, Detector (Load END)		
S703	40T71025F01	Switch, Detector (Limit)		
SD701	01A90816F01	Assy., DP Frame Solenoid		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Cabinet Assembly Parts List

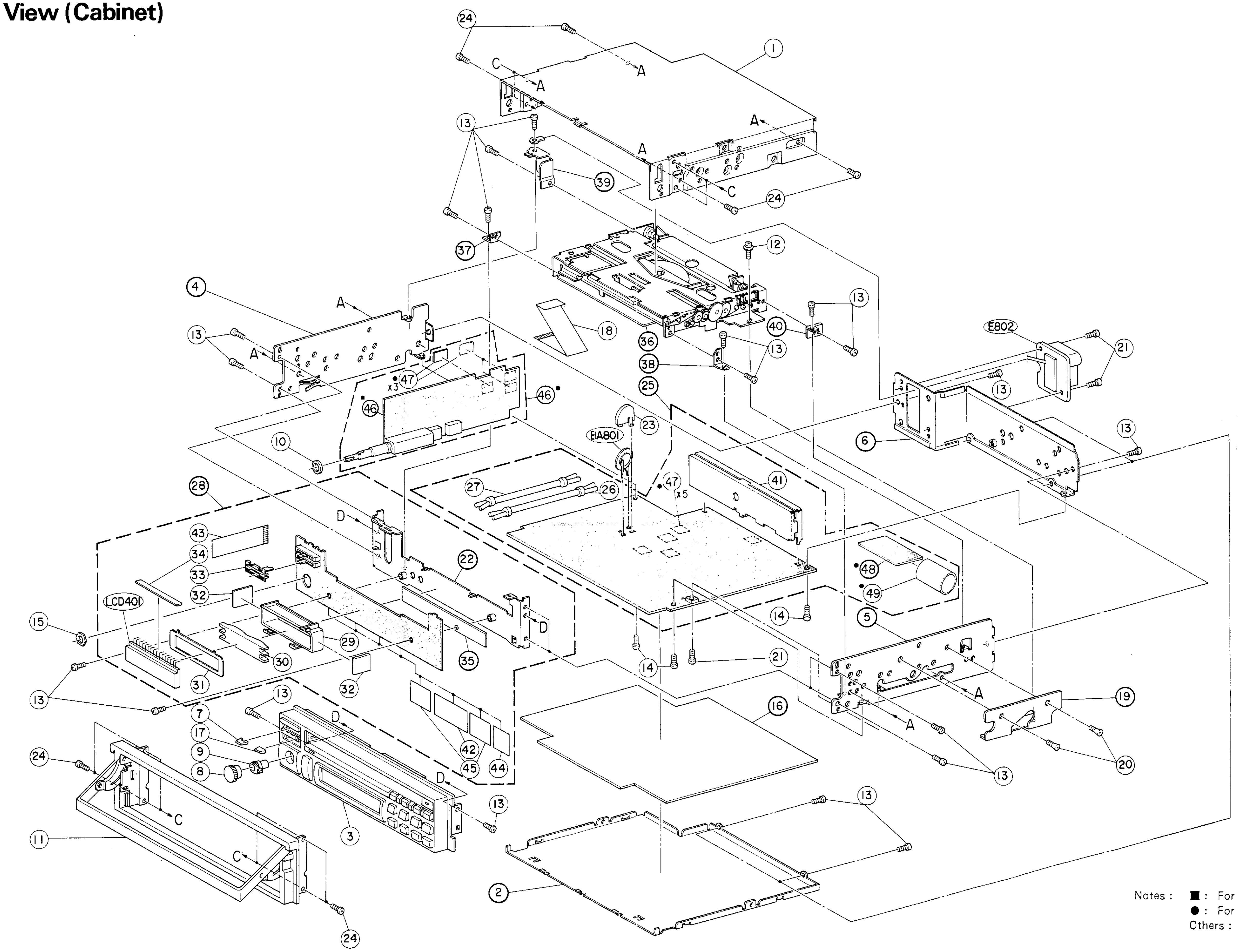
NOTE : The parts without part numbers are not supplied.

Symbol No.		Index	Part No.	Description		
	1	1-F	15C96403F01	Cover, Top		
●	3	5-C	13D94083F03	Assy., Nosepiese		
■	3	5-C	13D94083F04	Assy., Nosepiece		
	7	5-B	36B94116F01	Knob, Slide		
	8	5-B	36A94114F01	Knob, Control (Front)		
	9	5-B	36A94115F01	Knob, Control (Rear)		
	10	3-C	04A43020G05	Washer (M9.2)		
	11	5-A	07C10065W01	Assy., Handle Bracket		
	12	2-F	03C42723U04	Screw, Cup (M2.6 × 8)		
	13		03S44205G07	Screw, Pan (M2.6 × 5)		
	14		03S44205G48	Screw, Pan (M2.6 × 5)		
	15	4-A	02S40000G20	Nut, Hex (M9)		
	17	5-B	36B94116F02	Knob, Slide		
	18	2-E	30T92773F01	FFC, 16P		
	20	5-G	03S40011G84	Screw, Countersunk (M2.6 × 6)		
	21		03S44205G33	Screw, Pan (M2.6 × 8)		
	23	3-E	15A84078F01	Case, Battery		
	24		03S44205G34	Screw, Pan (M2.6 × 5)		
	26	3-E	01T83932F02	Assy., Shield Wire		
	27	3-D	30T95171F01	Shield, Wire		
	29	4-C	15B94117F01	Case, LCD		
	30	4-C	61A94118F01	Lens, LCD		
	31	4-B	26A94119F01	Reflector, Sheet		
	32		14S94461F16	Insulator, Cover		
	33	4-B	07A94609F01	Bracket, Shield		
	34	4-B	14S81482F90	Insulator, Cover		
●	41	3-F	77C96091F01	Tuner Unit (MB4G7010) (FE1)		
■	41	3-F	77C96028F01	Tuner Unit (MBE7010) (FE1)		
	42	5-D	01T94579F03	Flat, Wire (25P)		
	43	4-B	30T82417F01	Flat, Cable (12P)		
	44	5-D	01T94579F01	Flat, Wire (5P)		
	45	5-D	01T94579F02	Flat, Wire (9P)		
●	47		14S53017F60	Insulator, Cover		
●	49	4-F	37T43734F03	Sumi, Tube		

Symbol No.		Index	Part No.	Description		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

Exploded View (Cabinet)


24
1
C
A
13
39
37
12
4
18
36
40
38
25
E802
21
47
x3
46
BA801
23
10
6
27
26
x5
41
28
D
43
34
33
22
48
49
32
LCD401
15
29
35
14
5
30
31
7
17
9
8
42
45
44
16
19
3
20
11
2

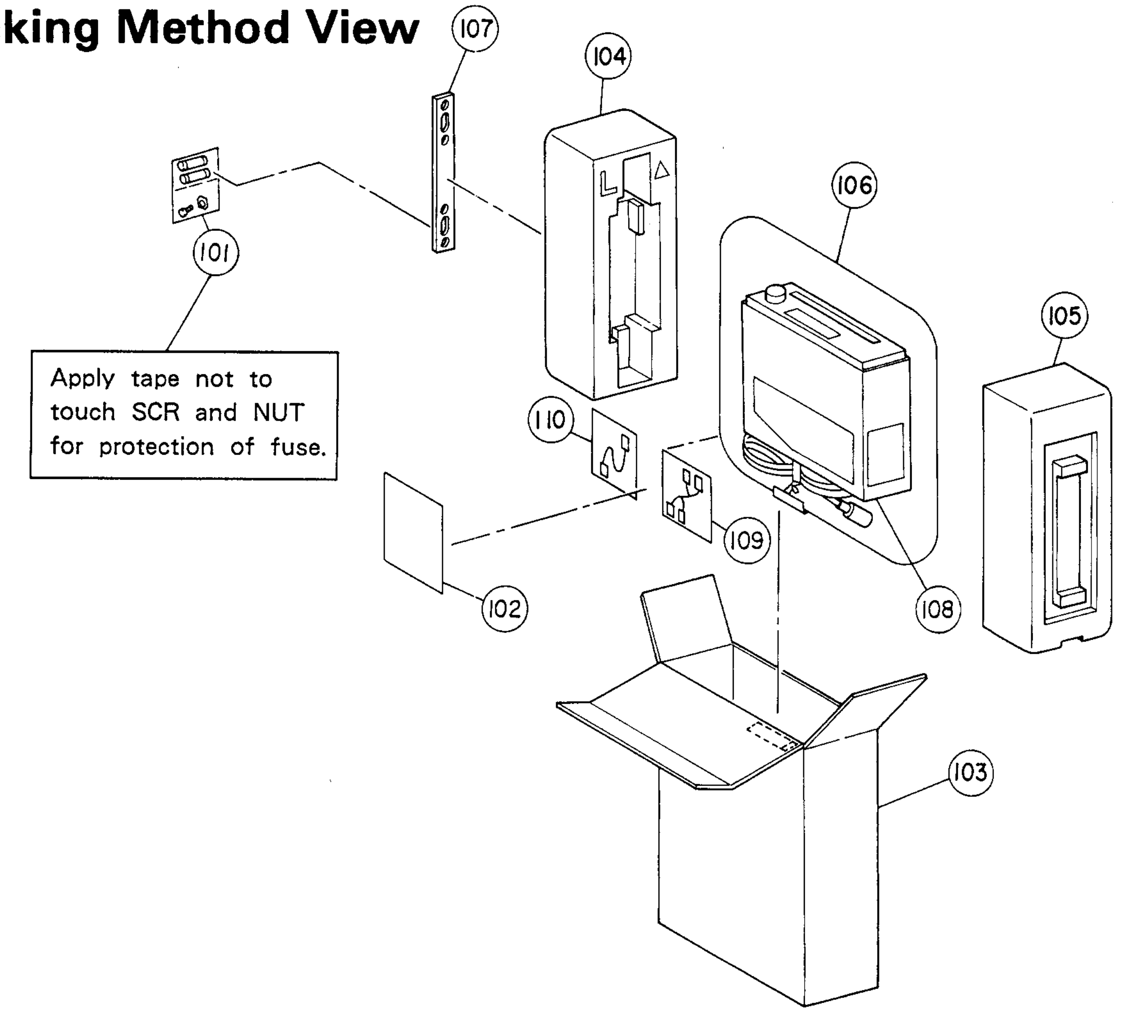
Notes : ■ : For 7905M model only,
● : For 7905E model only,
Others : Common.

Packing Assembly Parts List

Symbol No.	Part No.	Description		
101	01V94500F97	Assy., Kit Installation		
101-1	02B47353F01	Nut, Hex (M5)		
101-2	03S40012G66	Screw, Tapping (M5×20)		
101-3	03B44963F03	Bolt, Hex W/Washer (M5×10)		
101-4	46A42363F01	Stud, Bolt		
101-5	03A40155F01	Bolt, Hex (M5×18)		
101-6	65A40348G04	Fuse, 3A (For ACC/BATT. Lines)		
101-7	03A84814F04	Screw, Bind (M2.6×8)		
101-8	43A58272F03	Spacer		
101-9	45A41684U01	Arm, Adapter		
● 102	68P93881F45	Owner's Manual		
■ 102	68P93881F46	Owner's Manual		
● 103	56S90024F76	Carton, Packing (Individual)		
■ 103	56S90024F75	Carton, Packing (Individual)		
104	56D82187F01	Tray, Packing (L)		
105	56D82187F02	Tray, Packing (R)		
106	56B40990T36	Sack, Polyethylene		
107	07B64552F01	Bracket, Strap Receiver		
● 108	01V94200F07	Assy., Mother Case		
■ 108	01V94500F61	Assy., Mother Case		
● 108-1	01T94603F01	Assy., QRB Connector [E801] (with 3A Fuse, For ACC/BATT, LINES)		
■ 108-1	01T94603F03	Assy., QRB Connector (with 3A Fuse, For ACC/BATT, LINES)		
108-2	15D94518F01	Case, Motor		
108-3	03S44205G33	Screw, Pan (M2.6×8)		
108-4	03S44205G07	Screw, Pan (M2.6×5)		
■ 108-5	14S71058F03	Insulator, Cover		
109	01T96094F01	Assy., RCA600		
110	01T96095F01	Assy., Connector (4P)		

Notes : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

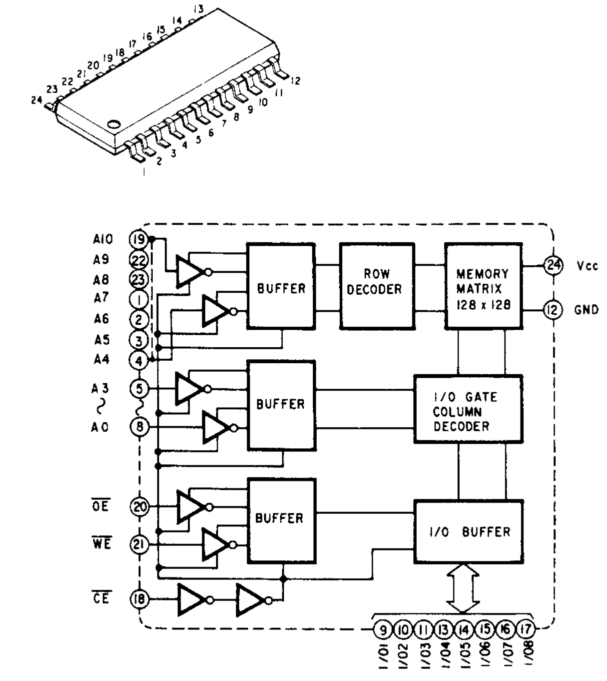
Packing Method View


107
104
106
101
105
110
109
102
108
103
L

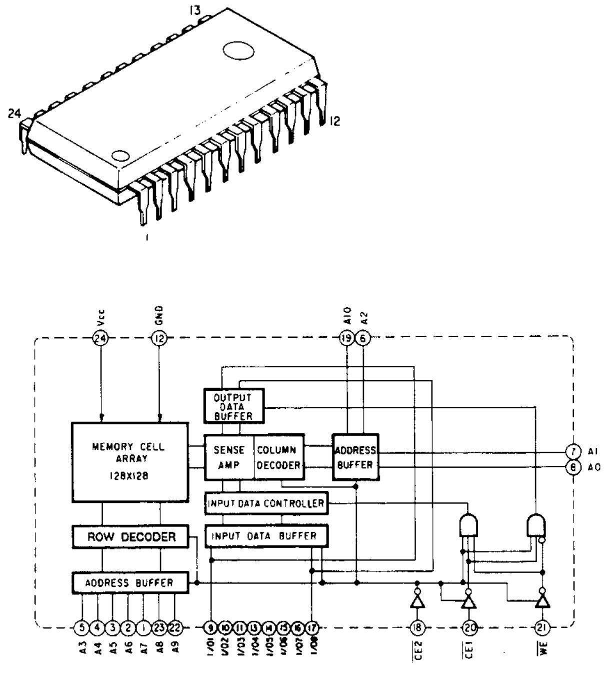
Apply tape not to touch SCR and NUT for protection of fuse.

Semi-Conductor Lead Identifications

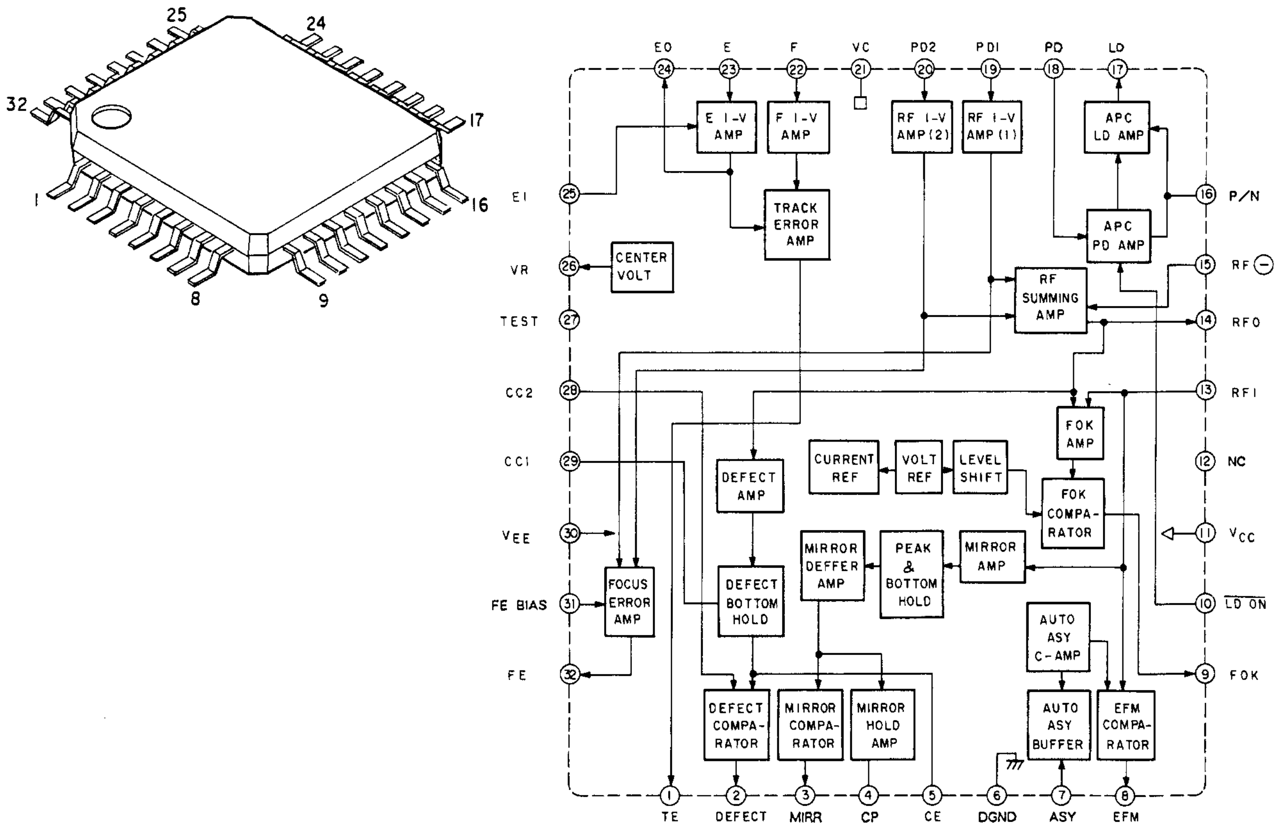
CXK5816M : IC12


A10
A9
A8
A7
A6
A5
A4
A3
A0
OE
WE
CE
BUFFER
BUFFER
BUFFER
ROW DECODER
MEMORY MATRIX 128 x 128
I/O GATE COLUMN DECODER
I/O BUFFER
Vcc
GND
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
I/O8

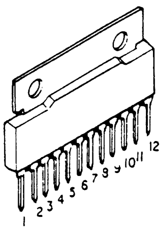
LC3516AML-15 : IC12

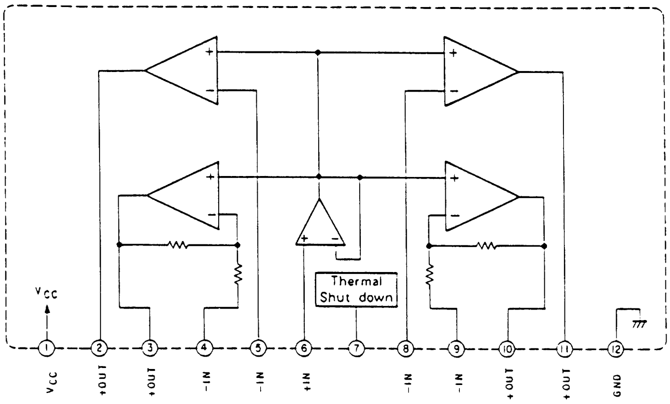

Vcc
GND
A10
A2
OUTPUT DATA BUFFER
MEMORY CELL ARRAY 128X128
SENSE AMP
COLUMN DECODER
ADDRESS BUFFER
INPUT DATA CONTROLLER
ROW DECODER
INPUT DATA BUFFER
ADDRESS BUFFER
A1
A0
A3
A4
A5
A6
A7
A8
A9
I/O1
I/O2
I/O3
I/O4
I/O5
I/O6
I/O7
I/O8
CE2
CE1
WE

CXA1081Q : IC14

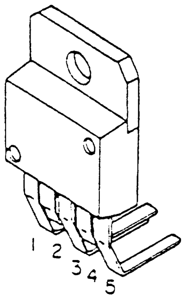

EO
E
F
VC
PD2
PD1
PD
LD
E I-V AMP
F I-V AMP
RF I-V AMP (2)
RF I-V AMP (1)
APC LD AMP
TRACK ERROR AMP
APC PD AMP
CENTER VOLT
RF SUMMING AMP
FOK AMP
CURRENT REF
VOLT REF
LEVEL SHIFT
DEFECT AMP
FOK COMPA-RATOR
MIRROR DEFFER AMP
PEAK & BOTTOM HOLD
MIRROR AMP
FOCUS ERROR AMP
DEFECT BOTTOM HOLD
AUTO ASY C-AMP
DEFECT COMPA-RATOR
MIRROR COMPA-RATOR
MIRROR HOLD AMP
AUTO ASY BUFFER
EFM COMPA-RATOR
EI
VR
TEST
CC2
CC1
VEE
FE BIAS
FE
P/N
RF ⊖
RFO
RFI
NC
Vcc
LD ON
FOK
TE
DEFECT
MIRR
CP
CE
DGND
ASY
EFM

BA6291 : IC17

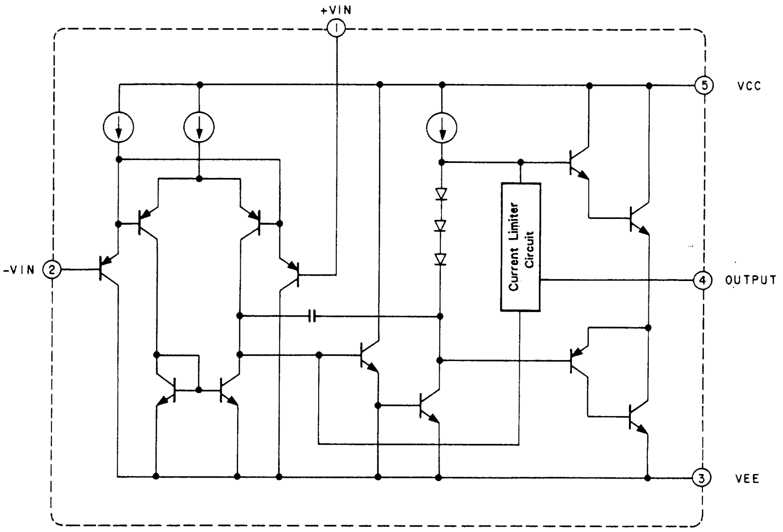

1
2
3
4
5
6
7
8
9
10
11
12


Vcc
Thermal Shut down
1 Vcc
2 +OUT
3 +OUT
4 -IN
5 -IN
6 +IN
7
8 -IN
9 -IN
10 +OUT
11 +OUT
12 GND

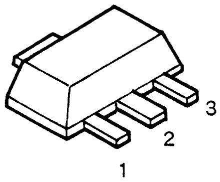
LA6501-LR : IC18



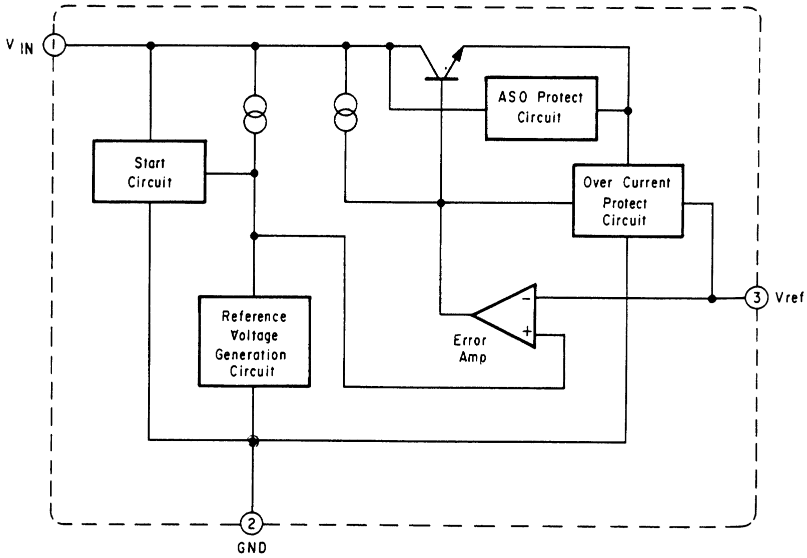
1. +VIN
2. −VIN
3. VEE
4. OUTPUT
5. Vcc


+VIN
1
5 VCC
-VIN 2
Current Limiter Circuit
4 OUTPUT
3 VEE

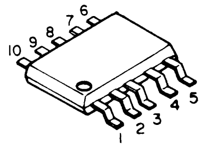
M5236ML : IC21

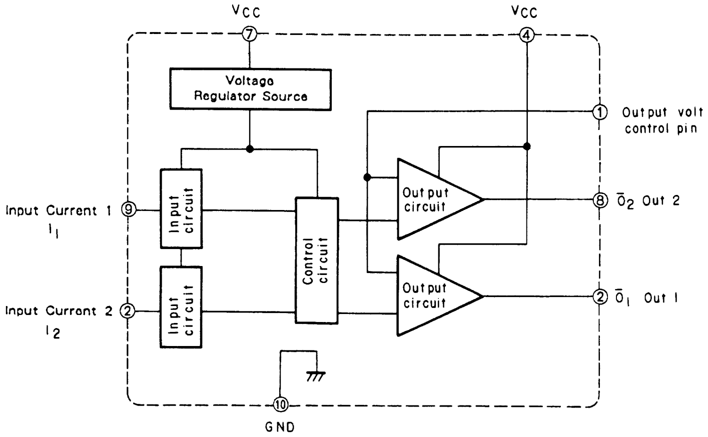


1 : INPUT
2 : GND
3 : V REF

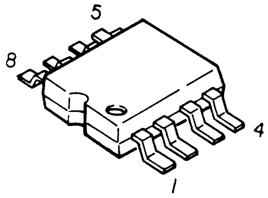

VIN 1
ASO Protect Circuit
Start Circuit
Over Current Protect Circuit
3 Vref
Reference Voltage Generation Circuit
Error Amp
2 GND

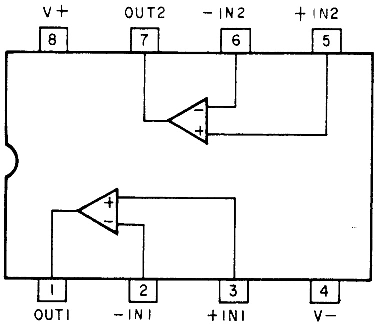
M54641FP : IC25


10
9
8
7
6
1
2
3
4
5

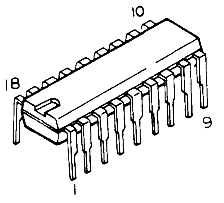

Vcc
⑦
Vcc
④
Voltage Regulator Source
① Output volt control pin
Input Current 1 ⑨
I_1
Input circuit
Control circuit
Output circuit
⑧ $\bar{O}_2$ Out 2
Input Current 2 ②
I_2
Input circuit
Output circuit
② $\bar{O}_1$ Out 1
⑩
GND

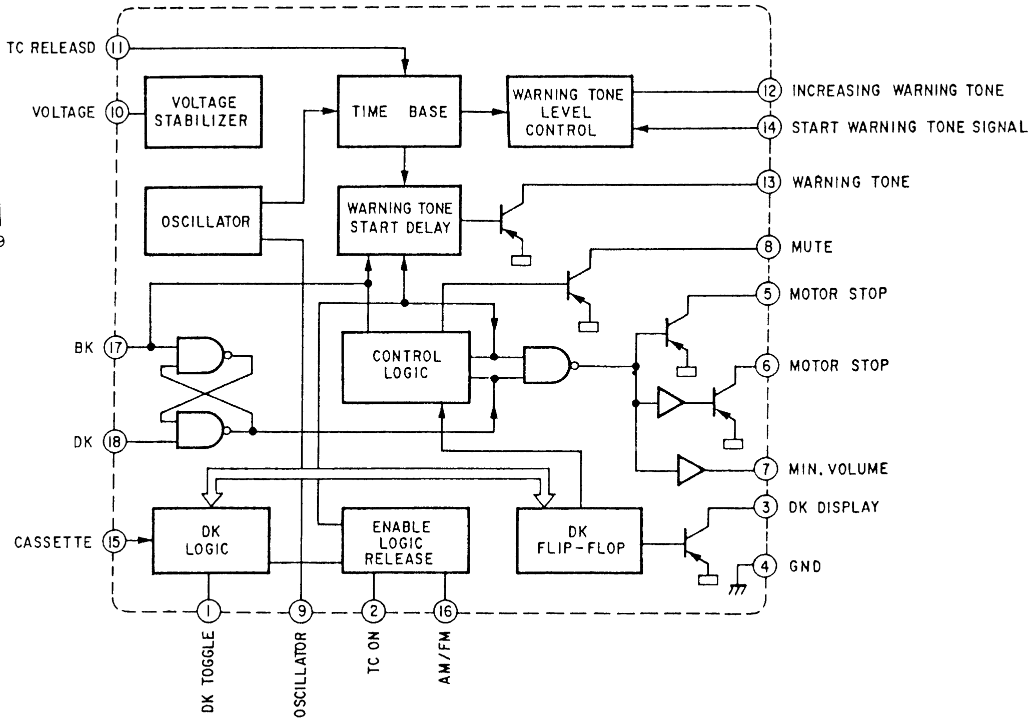
BA10358F }: IC26
NJM2904M




V+
OUT2
− IN2
+ IN2
8
7
6
5
1
2
3
4
OUT1
− IN1
+ IN1
V−

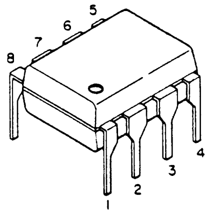
■ TDA1589 : IC101

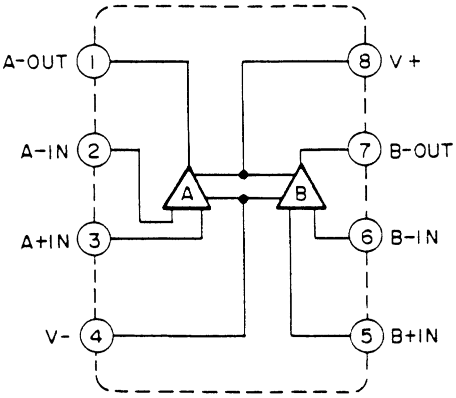



TC RELEASD ⑪
VOLTAGE ⑩
VOLTAGE STABILIZER
TIME BASE
WARNING TONE LEVEL CONTROL
⑫ INCREASING WARNING TONE
⑭ START WARNING TONE SIGNAL
OSCILLATOR
WARNING TONE START DELAY
⑬ WARNING TONE
⑧ MUTE
⑤ MOTOR STOP
BK ⑰
CONTROL LOGIC
⑥ MOTOR STOP
DK ⑱
⑦ MIN. VOLUME
③ DK DISPLAY
CASSETTE ⑮
DK LOGIC
ENABLE LOGIC RELEASE
DK FLIP-FLOP
④ GND
①
⑨
②
⑯
DK TOGGLE
OSCILLATOR
TC ON
AM/FM

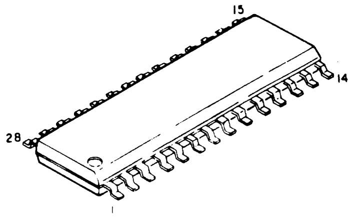
NOTE : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

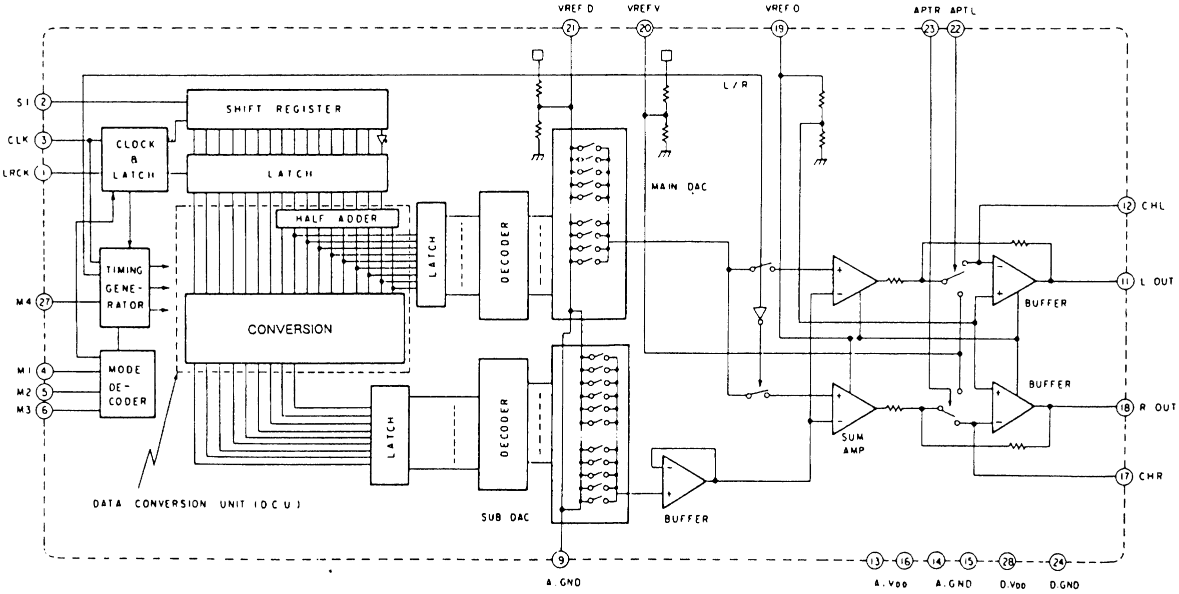
■ NJM4558D : IC103
BA4560 : IC202, 204, 206, 207
NJM4560D : IC202, 204, 206, 207, 301, 303, 304




A-OUT
1
A-IN
2
A+IN
3
V-
4
A
B
8
V+
7
B-OUT
6
B-IN
5
B+IN

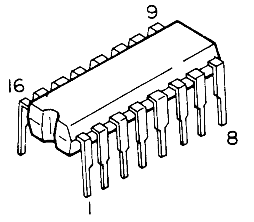
µ PD6355G : IC201

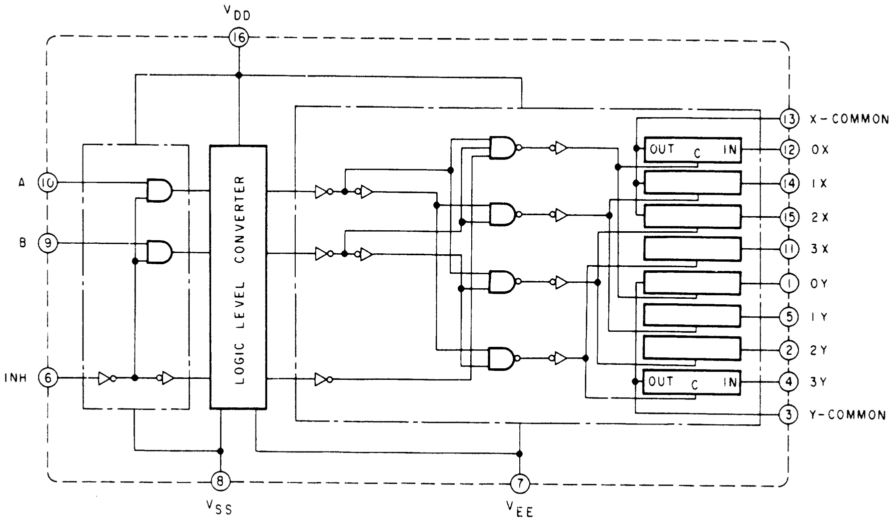



VREF D
VREF V
VREF O
APTR
APTL
21
20
19
23
22
SI
2
CLK
3
LRCK
1
M4
27
M1
4
M2
5
M3
6
SHIFT REGISTER
LATCH
CLOCK & LATCH
TIMING GENE-RATOR
MODE DE-CODER
HALF ADDER
CONVERSION
LATCH
DECODER
LATCH
DECODER
MAIN DAC
SUB DAC
L/R
BUFFER
SUM AMP
BUFFER
BUFFER
DATA CONVERSION UNIT (DCU)
12
CHL
11
L OUT
18
R OUT
17
CHR
9
A.GND
13
16
14
15
28
24
A.VDD
A.GND
D.VDD
D.GND

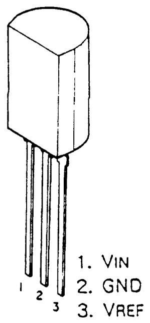
NOTE : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

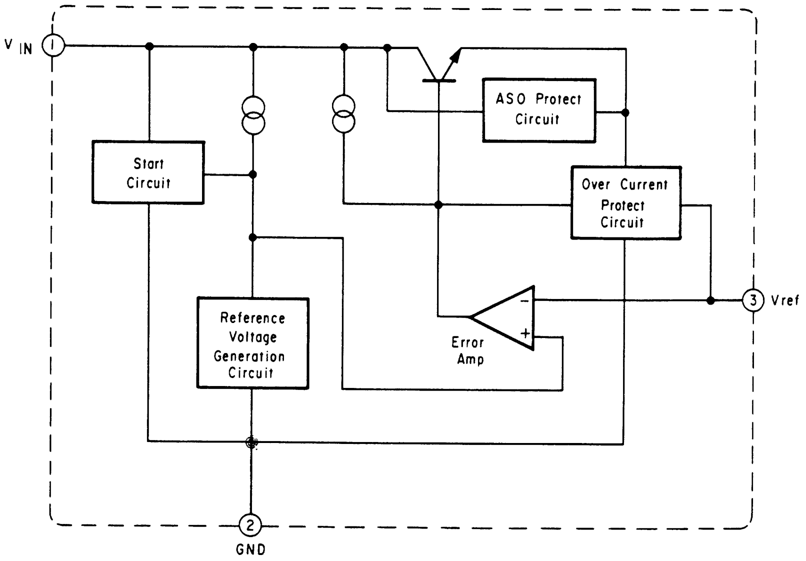
TC4052BP : IC203



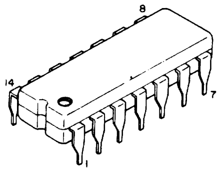

VDD
16
A 10
B 9
INH 6
LOGIC LEVEL CONVERTER
OUT C IN
OUT C IN
13 X-COMMON
12 0X
14 1X
15 2X
11 3X
1 0Y
5 1Y
2 2Y
4 3Y
3 Y-COMMON
8
VSS
7
VEE

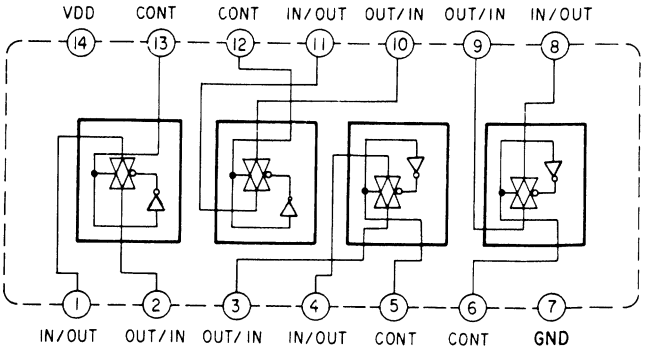
M5236L : IC205


1
2
3
1. VIN
2. GND
3. VREF

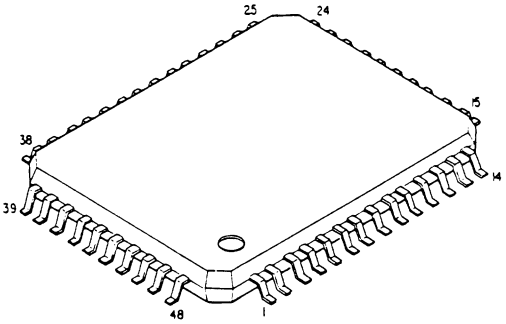

VIN 1
ASO Protect Circuit
Start Circuit
Over Current Protect Circuit
Reference Voltage Generation Circuit
Error Amp
3 Vref
2
GND

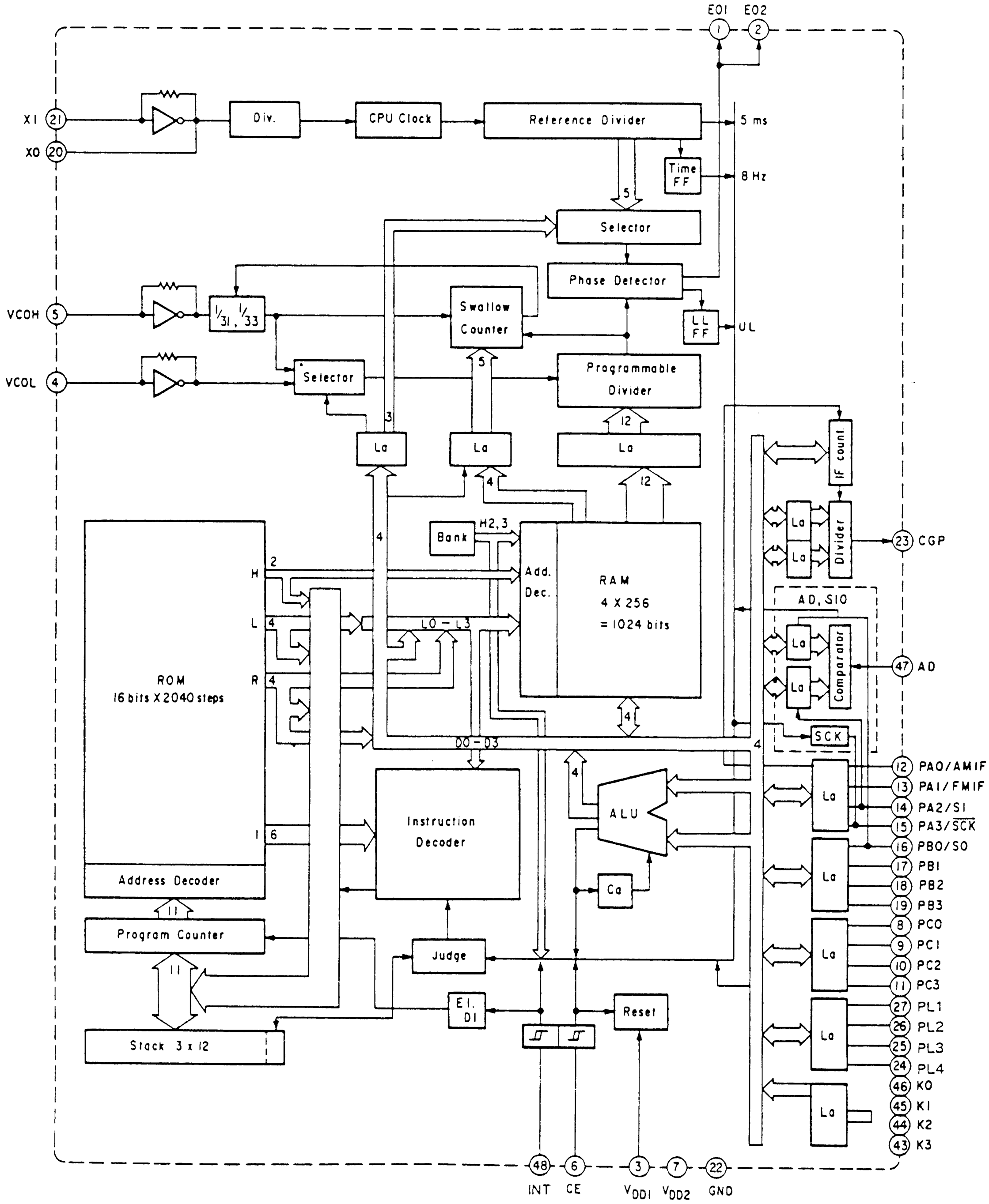
TC4066BP : IC302, 603




VDD 14
CONT 13
CONT 12
IN/OUT 11
OUT/IN 10
OUT/IN 9
IN/OUT 8
1 IN/OUT
2 OUT/IN
3 OUT/IN
4 IN/OUT
5 CONT
6 CONT
7 GND

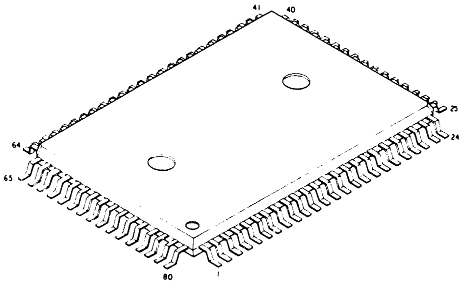
µ PD1722GH : IC501

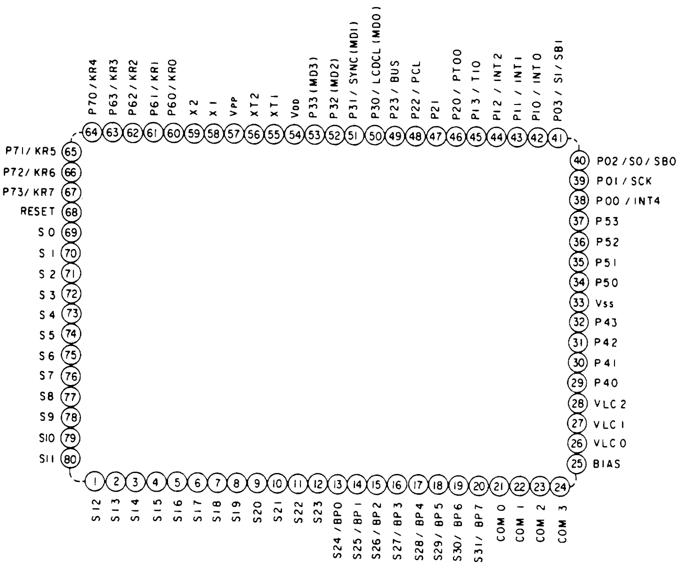

25
24
15
38
14
39
48
1


EO1
EO2
X1 21
X0 20
Div.
CPU Clock
Reference Divider
5 ms
Time FF
8 Hz
5
Selector
Phase Detector
VCOH 5
1/31, 1/33
Swallow Counter
LL FF
UL
VCOL 4
Selector
Programmable Divider
3
5
12
La
La
La
4
12
IF count
Bank
H2, 3
La
La
Divider
23 CGP
2
H
Add. Dec.
RAM
4 X 256
= 1024 bits
AD, SIO
L
4
L0 - L3
La
La
Comparator
47 AD
ROM
16 bits X 2040 steps
R
4
4
SCK
D0 - D3
4
12 PA0/AMIF
13 PA1/FMIF
La
14 PA2/SI
ALU
15 PA3/SCK
I
6
Instruction Decoder
16 PB0/SO
17 PB1
La
18 PB2
Ca
19 PB3
Address Decoder
8 PC0
11
9 PC1
Program Counter
Judge
La
10 PC2
11
11 PC3
EI, DI
Reset
27 PL1
26 PL2
La
25 PL3
Stack 3 x 12
24 PL4
46 K0
45 K1
La
44 K2
43 K3
48 INT
6 CE
3 V_{DD1}
7 V_{DD2}
22 GND

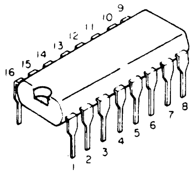
94923F03 : IC601

94530F03 : IC601


41
40
25
24
64
65
80
1


P70/KR4 64
P63/KR3 63
P62/KR2 62
P61/KR1 61
P60/KR0 60
X2 59
X1 58
VPP 57
XT2 56
XT1 55
VDD 54
P33(MD3) 53
P32(MD2) 52
P31/SYNC(MD1) 51
P30/LCDCL(MD0) 50
P23/BUS 49
P22/PCL 48
P21 47
P20/PT00 46
P13/TI0 45
P12/INT2 44
P11/INT1 43
P10/INT0 42
P03/SI/SBI 41
40 P02/SO/SBO
39 P01/SCK
38 P00/INT4
37 P53
36 P52
35 P51
34 P50
33 VSS
32 P43
31 P42
30 P41
29 P40
28 VLC2
27 VLC1
26 VLC0
25 BIAS
P71/KR5 65
P72/KR6 66
P73/KR7 67
RESET 68
S0 69
S1 70
S2 71
S3 72
S4 73
S5 74
S6 75
S7 76
S8 77
S9 78
S10 79
S11 80
1 S12
2 S13
3 S14
4 S15
5 S16
6 S17
7 S18
8 S19
9 S20
10 S21
11 S22
12 S23
13 S24/BP0
14 S25/BP1
15 S26/BP2
16 S27/BP3
17 S28/BP4
18 S29/BP5
19 S30/BP6
20 S31/BP7
21 COM0
22 COM1
23 COM2
24 COM3

TC4051BP : IC602


1
2
3
4
5
6
7
8
9
10
11
12
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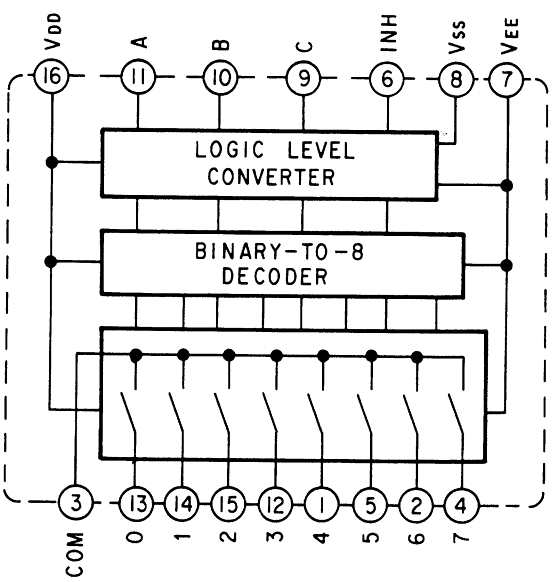
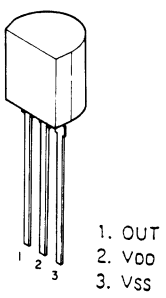
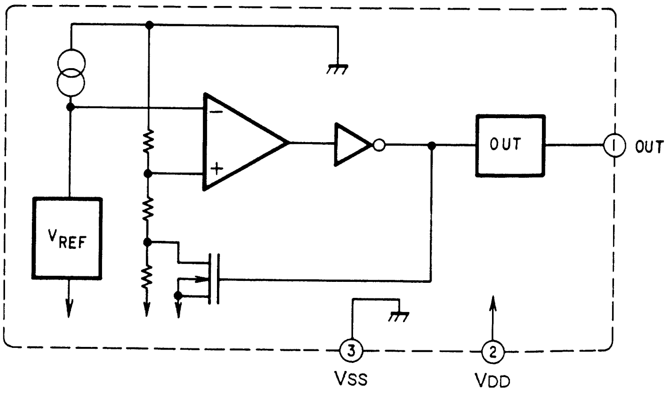
14
15
16


VDD 16
A 11
B 10
C 9
INH 6
VSS 8
VEE 7
LOGIC LEVEL CONVERTER
BINARY-TO-8 DECODER
COM 3
0 13
1 14
2 15
3 12
4 1
5 5
6 2
7 4

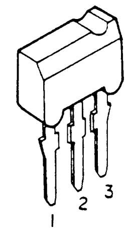
S-8052ALR : IC604

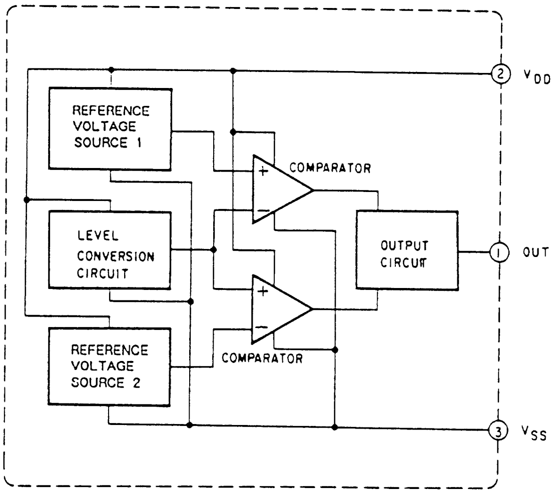


1. OUT
2. VDD
3. VSS

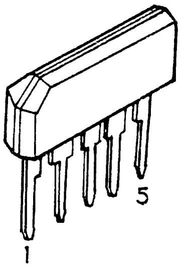

−
+
VREF
OUT
1 OUT
3 VSS
2 VDD

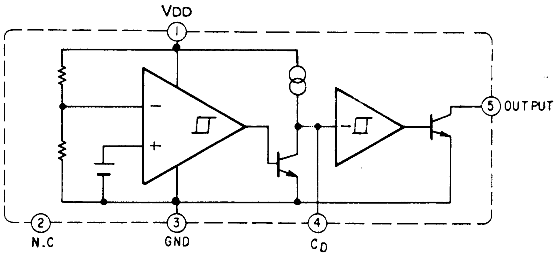
MN1280 : IC605



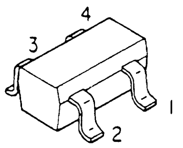

REFERENCE VOLTAGE SOURCE 1
LEVEL CONVERSION CIRCUIT
REFERENCE VOLTAGE SOURCE 2
COMPARATOR
COMPARATOR
OUTPUT CIRCUIT
② VDD
① OUT
③ VSS
+
−
+
−

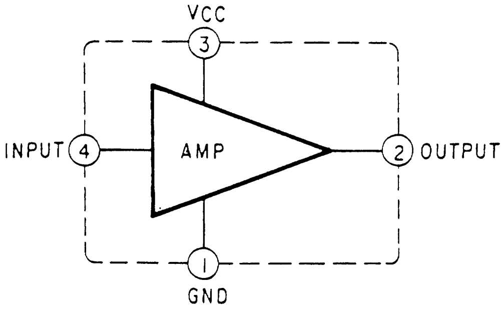
M51953BL : IC801




VDD
①
⑤ OUTPUT
② N.C
③ GND
④ CD
−
+

μ PC1675G : IC1001




VCC
③
INPUT ④
AMP
② OUTPUT
①
GND

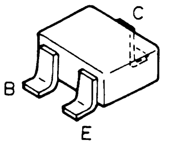
DTC124EU : Q203, 806, 808, 810, 811, 812, 1001, 1006, 1009, 1014

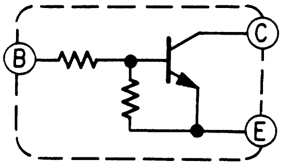
■ DTC124EU : Q204, 501, 813, 824, 1004

● DTC124EU : Q1011, 1013

DTC124K : Q12, 18, 24, 28, 31

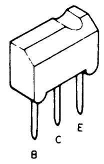
DTC144K : Q21, 29



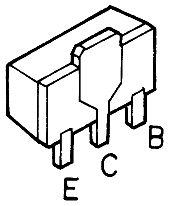


NOTE : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

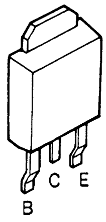
2SD661 : Q1002, 1003
2SB644 : Q819, 1007, 1008
2SD973A : Q1010
● 2SD636 : Q206
2SD638 : Q803, 804



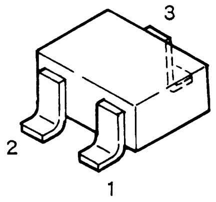
2SB1073 : Q11
2SB1188 : Q19, 33
2SD1766 : Q32



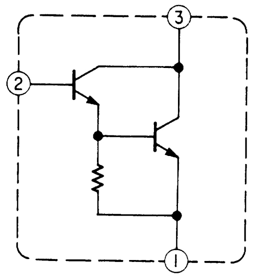
2SD1760 : Q16



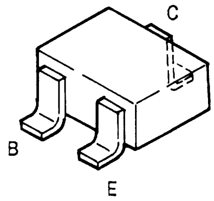
2SD1383K : Q13

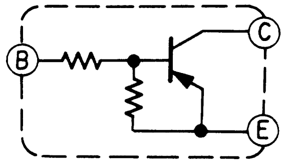


(1) Emitter
(2) Base
(3) Collector

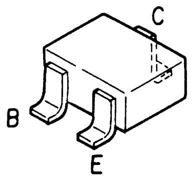


DTA124K : Q17, 27, 30
DTA124EU : Q805
DTA114EU : Q807

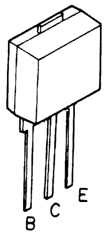




2SC2412K : Q22
■ 2SC4081 : Q104
● 2SD1328 : Q303, 304
2SA1576 : Q601, 809

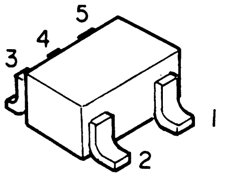


2SB1172A : Q25
2SD1742 : Q26

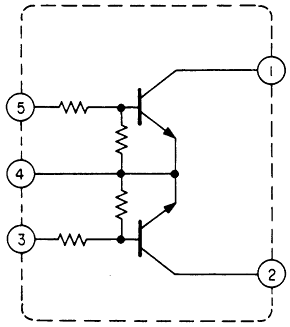


NOTE : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

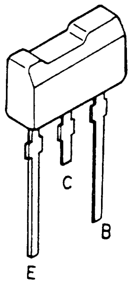
■ FMG1 : Q102
FMG1 : Q301, 820
● FMG1 : Q603



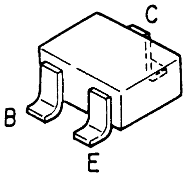
1. Collector
2. Collector
3. Base
4. Emitter
5. Base

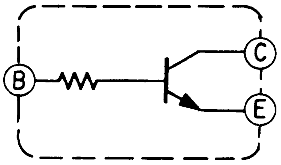


■ 2SD1991 : Q103, 206

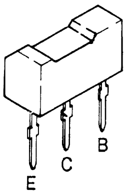


DTC114TU : Q201, 202, 602

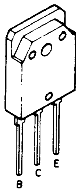




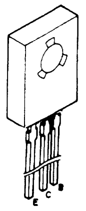
2SB911M : Q205, 825



2SD1330 : Q307, 308, 309, 310



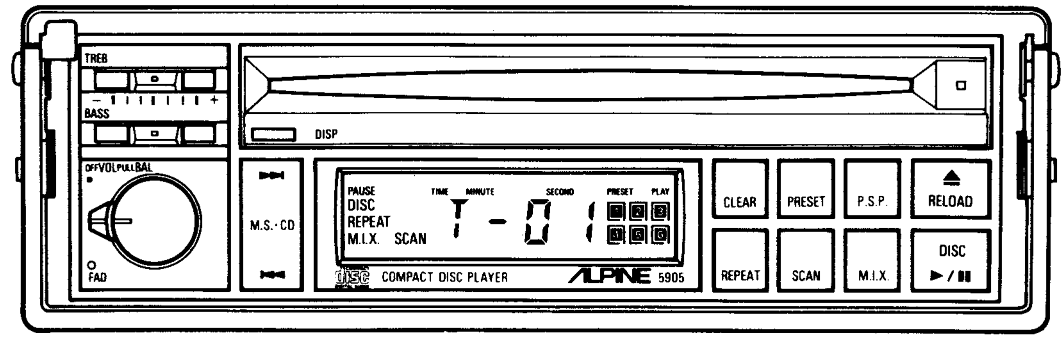
2SD1189 : Q814



NOTE : ■ : For 7905M model only, ● : For 7905E model only, Others : Common.

ALPINE SERVICE MANUAL

Compact Disc Player


TREB
BASS
DISP
OFF VOL PULL BAL
FAD
M.S.·CD
PAUSE
DISC
REPEAT
M.I.X.
SCAN
TIME
MINUTE
SECOND
PRESET
PLAY
T - 0 1
COMPACT DISC PLAYER
ALPINE 5905
CLEAR
PRESET
P.S.P.
RELOAD
REPEAT
SCAN
M.I.X.
DISC

5905

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Specifications

CD SECTION

System	Optical (Compact Disc System)
Quantizing Bit Number	16 Bit Linear System
Channels	2 Channels
Distortion (1kHz)	0.015%
Frequency Response (1kHz)	±4dB (20Hz) ±1dB (100Hz~10kHz) ±2dB (20kHz)
S/N Ratio	80dB
Separation	60dB (1kHz)
Noise Level	0.1mV
Currents (at play)	1.2A
Tone Control Effect	Bass : ±12dB±3dB (100Hz) Treble : ±12dB±3dB (10kHz)

GENERAL

Power Supply	14V DC
Output Voltage/Impedance	1V/10k ohm
Semiconductors	26 IC's, 45 Transistors, 28 Diodes, 11 Zener Diodes (AO model only) 27 Diodes, 10 Zener Diodes (EO model only)
Dimensions	Nose : 178 (W) ×50 (H) ×15 (D) mm Chassis : 178 (W) ×50 (H) ×150 (D) mm
Weight	1.6kg

COMPACT DISC

Track Pitch	1.6 μm
Modulation Frequency	44.1kHz
Transfer Rate	4.3218Mbit/sec
Dimensions	120×1.2mm

NOTE : Due to continuing product improvement, specifications and designs are subject to change without notice.

CONTROLS & INDICATORS

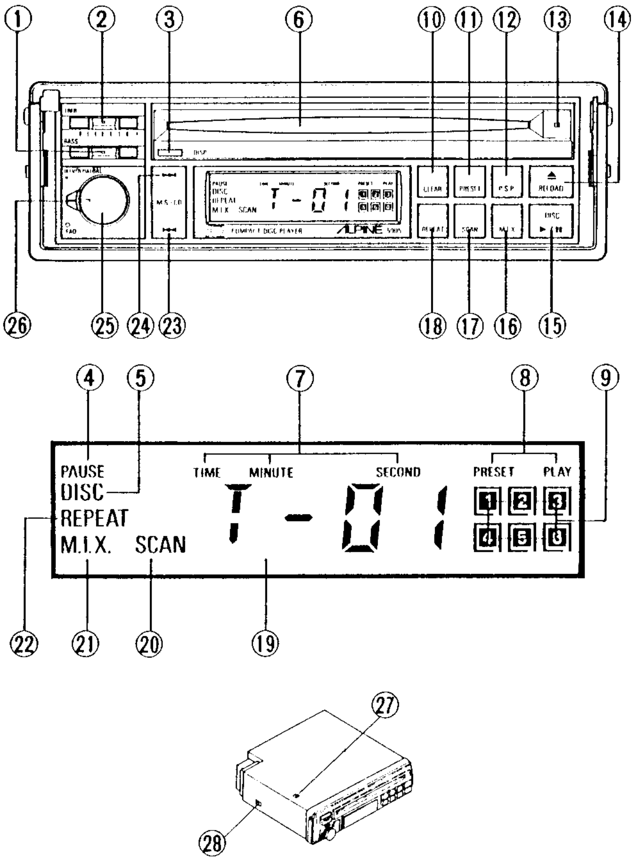


Figure 1

Listed below are all the Controls and their indicators. Please see the Operation Section for explanations.

① **BASS Control**
② **TREBLE Control**
③ **DISP Switch**

④ **PAUSE Indicator**
⑤ **DISC Indicator**
⑥ **Disc Slot**
⑦ **Time Indicator**
⑧ **P.S.P. (Preset Play) Indicator**
⑨ **Preset Address Indicators**

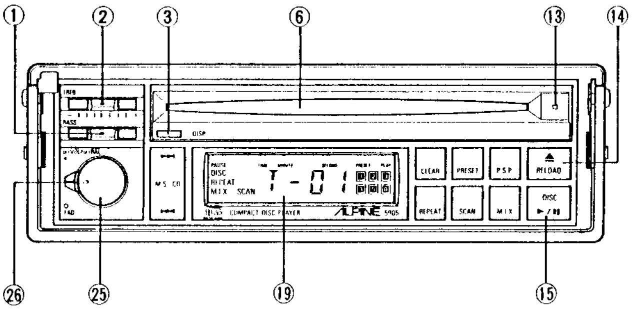
⑩ **CLEAR Switch**
⑪ **PRESET Switch**
⑫ **P.S.P. (Preset Play) Switch**
⑬ **Reset Switch**
⑭ **RELOAD (EJECT) Switch**
⑮ **DISC (PLAY/PAUSE) Switch**
⑯ **M.I.X. Switch**
⑰ **SCAN Switch**
⑱ **REPEAT Switch**

⑲ **Digital Display**
⑳ **SCAN Indicator**
㉑ **M.I.X. Indicator**
㉒ **REPEAT Indicator**

㉓ **M.S. (⏮) Switch**
㉔ **M.S. (⏭) Switch**
㉕ **Power Switch/Volume Control/Balance Control (Pull)**
㉖ **FADER Control**

㉗ **TONE BYPASS Switch (Top of Unit)**
㉘ **Tuner/Line Selection Switch (On the Side)**

OPERATION



BASIC OPERATION

System initiation
When operating for the very first time after installation or replacement of the car battery, press the Reset Switch ⑬ with a ball-point pen or other pointed object.

Power Switching and Volume Control ㉕
Rotating the Power Switch ㉕ clockwise turns power ON and continuously increases the volume. Rotating the control counter-clockwise will continuously decrease the volume, and turn the Power Off.

NOTE: The noise level on compact discs is much lower than on analog-type records or tapes; therefore, when inserting a disc, keep the volume control turned fully counterclockwise, then adjust volume by gradually turning the control clockwise once playback begins.
Do not turn clockwise too abruptly as this could damage the speakers.

Balance Control ㉕
Pull on the Volume Control and rotate to balance between left and right speakers.

Fader Control ㉖
Rotate the Fader Control ㉖ for your desired front to rear volume balance.

Separate Bass and Treble Controls (①, ②)
Slide these controls to the right to increase, and to the left to decrease the level of Bass or Treble. **Note:** Bass and Treble Controls do not function when the Tone By-Pass Switch (on top of the unit) is in the ON position.

CD OPERATION

Cautions During Playback

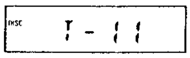
- Playing a disc while driving on a very bumpy road may result in skips but this will not scratch the disc or damage the player.

Notes:
1. Your player accepts only one disc at a time for playback. Do not attempt to load more than one disc.
2. Make sure the label side is facing up, when you insert the disc. Your player will automatically eject any disc that is inserted incorrectly. If the player continues to eject a correctly inserted disc, push the reset switch ⑬ with a sharp object such as a ballpoint pen.
3. Do not attempt to use 3-inch CD's in this player. The adaptor ring may get stuck inside and damage the player.
4. Make sure your discs are labeled as shown below:

COMPACT
disc
DIGITAL AUDIO

- **Load and Reload**
  1. Insert a disc into the slot ⑥.
     When the disc is halfway in, the power loading system will take over and guide the disc into play position.
  2. If the disc is left at least halfway in, press the RELOAD switch ⑭ or DISC switch ⑮.
  3. The digital display ⑲ shows " T-00 " for a second while the data on the disc is read.
  4. When a disc is loaded during radio reception, the CD mode will automatically switch on.

- **Track/Elapsed Time Display Switching**
  Press the Display Switch ③ for the Track Number being played and the Elapsed Time for the current track to be shown in the Digital Display ⑲. See below.

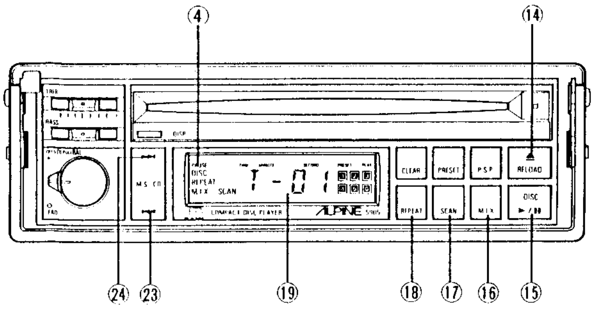


Track Mode

Time Mode

- **Eject**
  Press the RELOAD (EJECT) switch ⑭. The disc come partially out. If the eject status is maintained more than 15 seconds, the self loading system will be automatically actuated and the disc will be reloaded into the mechanism and the player will be set to PAUSE mode.

CD OPERATION



Normal Play (Repeat All)

1. Load the Disc.
2. The digital display ⑲ will show " T-00 " for a second, then " T-01 " will be displayed and the first track on the disc will begin playback.
3. After the last track on the disc is played back, the pickup will return to the beginning of the disc and begin playback from that point.

Pause

Press the DISC switch ⑮ to hold playback temporarily. The PAUSE indicator ④ will be on and the playback stops, but the disc remains inside the player. To resume playback, press the DISC switch ⑮ again.

Music Sensor (Skip)

With this feature, you can get to the beginning of the music track of your choice simply and quickly. It is functional in the play or pause mode.
The digital display ⑲ shows the pick up location with the Track Number.

- To advance to a track somewhere ahead on the disc, press ►►❘ side of the Music Sensor switch ㉔.
  1. Playback stops, the pickup moves up to the beginning of the next track ahead. The digital display ⑲ shows the number of the next track the pickup has just reached.
  2. Playback begins immediately.
  3. If you wish to reach and play another track further ahead on the disc, continue pressing the ►►❘ side of the switch ㉔ until you reach the track of your choice.

- To replay the track that is currently playing, press the ❘◄◄ side of the Music Sensor switch ㉓.
  1. Playback stops, the pickup moves to the beginning of the current track. The track number display will remain the same.
  2. Playback begins immediately from the beginning of the track.
  3. If you wish to reach and play another track further behind on the disc, successive presses on the ❘◄◄ side of the switch ㉓ will move the pickup back until you reach the track of your choice.

In Preset Play

If a track not originally preset is chosen for play back with the Music Sensor (㉓, ㉔) during Preset Playback operation, the preset play operation will resume after completion of that selection.

FAST FORWARD/FAST BACKWARD

The Fast Forward/Fast Backward feature works in both play and pause modes.

1. Press either the MS UP ㉔ or MS DOWN ㉓ switch for more than 2 seconds.
2. To move the pickup forward rapidly, hold down the UP ►►❘ switch ㉔.
3. To move the pickup backward rapidly, hold down the DN ❘◄◄ switch ㉓.
4. When pickup reaches the end of the disc, it returns to the beginning automatically from the end, playback will start from the beginning of the disc.

REPEAT (One)

The repeat feature allows you to continuously playback a single track.

1. Press the REPEAT switch ⑱.
2. The music track shown in the display ⑲ will be played back repeatedly.
3. To stop repeat play back, press the REPEAT switch ⑱ a second time.

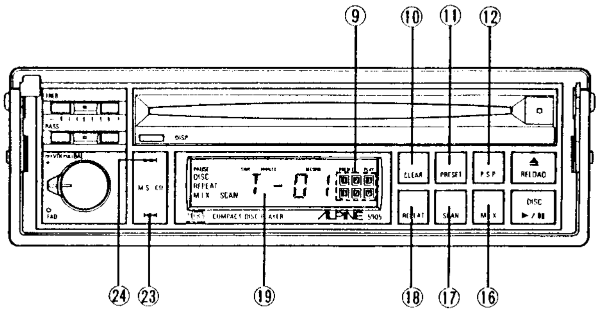
Scan (SCAN)

This function allows playback of the first 10 seconds of each track in succession. This function is useful in searching for a specific program ahead on a disc. A second push of the SCAN switch ⑰ deactivates the function.
The SCAN function also works in the Preset Play Mode. Push the SCAN switch ⑰ while in Preset Play. The first 10 seconds of the music tracks stored in the memory (up to 6) will be played back, in order, starting from the next Preset number. To stop Scan, press the SCAN switch ⑰ a second time.

Random Play (M.I.X.)

Depress the M.I.X. Switch ⑯ while in play or pause mode. Music tracks will be played back in random sequence according to random number generated by the micro processor. After all the tracks on the disc have been played back once, the player will begin a new random sequence.

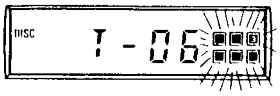
CD OPERATION



Preset Procedures

Preset

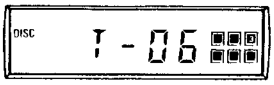
1. The preset memory can be programmed whether the disc is inserted or not.
2. Press the P.S.P. switch ⑫ for more than 2 seconds. The preset address indicator frame ⑨ will blink.
3. Press the PRESET switch ⑪ to select a preset. The address number in the indicator frame will be on.
4. Select your desired music track with the UP ㉔ and DOWN ㉓ switches. The track number is shown on the digital display.
   NOTE: Any track from 1 to 99 can be programmed (when the disc is not inserted) for preset play. However, if a track number higher than the actual number of selections on a disc is preset, that preset will automatically be cancelled when P.S.P. switch is pressed after the disc is inserted.



5. Press the PRESET switch ⑪. As shown in the illustration above, track number 6 has been memorized in the number 3 frame. The preset number will automatically advance to the next higher frame after the preset switch is pressed.

Preset Memory check

1. To find out which tracks were stored into memory, keep pressing the PRESET switch ⑪.
   The Address Number and Track Number will appear on the address indicator ⑨ and digital display ⑲ in order of Address Number.



For example, the figure shows that the Track Number 6 is addressed at 3.

Preset Play

To start Preset Play, Preset memory should have already been programmed. Refer to Preset procedure section.

1. Load a disc.
2. Press the P.S.P switch ⑫.
3. The playback will start from the track addressed at 1, 1 will appear on the preset address indicator ⑨ and the Track Number programmed at 1 shown on the digital display ⑲, and continue in order of Address Number to the last programmed number, up to 6.
4. After the last addressed track is played back, the pick up will return to the track programmed at 1 and begin play back again.
5. If the P.S.P. switch is pressed while Preset Play, Preset Play changes to Normal Play.

Preset Memory Clear

All Clear

1. Press the P.S.P. switch ⑫ for more than 2 seconds.
2. Push the Clear switch ⑩ for more than 2 seconds.

One Program Clear

1. Press the P.S.P. switch ⑫ for more than 2 seconds.
2. Push the Preset Switch of your choice.
3. Push Clear Switch ⑩. (**Caution:** If pushed for more than 2 sec. all presets will be cleared.)
4. The content in the preset No. will be cleared.
5. To program another selection into this preset, follow the preset procedures, above.

CONNECTIONS

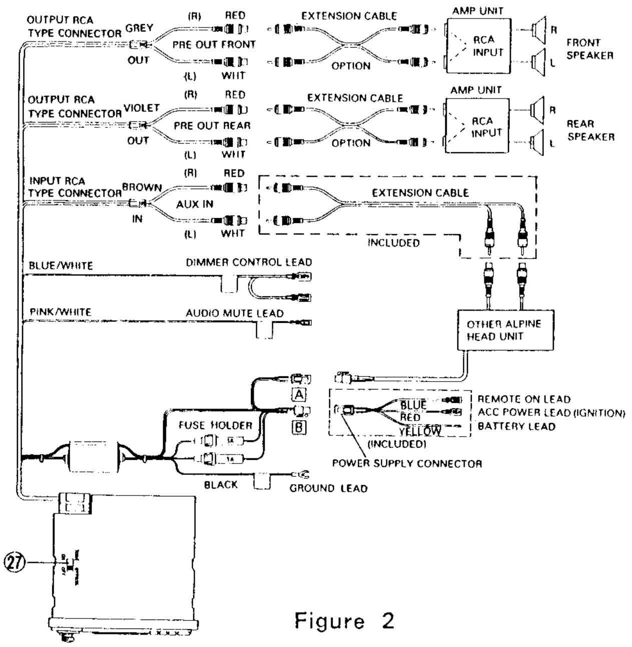
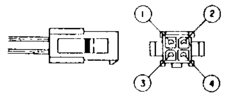

OUTPUT RCA
TYPE CONNECTOR
GREY
OUT
(R) RED
PRE OUT FRONT
(L) WHT
EXTENSION CABLE
OPTION
AMP UNIT
RCA INPUT
R
L
FRONT SPEAKER
OUTPUT RCA
TYPE CONNECTOR
VIOLET
OUT
(R) RED
PRE OUT REAR
(L) WHT
EXTENSION CABLE
OPTION
AMP UNIT
RCA INPUT
R
L
REAR SPEAKER
INPUT RCA
TYPE CONNECTOR
BROWN
IN
(R) RED
AUX IN
(L) WHT
EXTENSION CABLE
INCLUDED
BLUE/WHITE
DIMMER CONTROL LEAD
PINK/WHITE
AUDIO MUTE LEAD
OTHER ALPINE HEAD UNIT
A
B
FUSE HOLDER
BLUE
RED
YELLOW
REMOTE ON LEAD
ACC POWER LEAD (IGNITION)
BATTERY LEAD
(INCLUDED)
POWER SUPPLY CONNECTOR
BLACK
GROUND LEAD
㉗

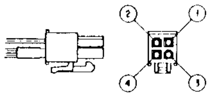
Figure 2

A AUX. POWER CONNECTOR



①	IN REMOTE
②	OUT PAUSE
③	BATTERY
④	IGNITION

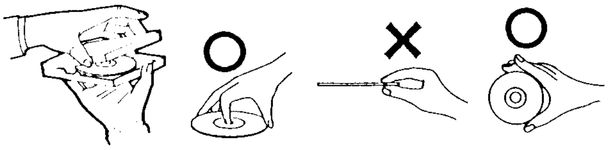
B MAIN POWER CONNECTOR



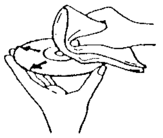
①	REMOTE ON
②	IN PAUSE
③	BATTERY
④	IGNITION

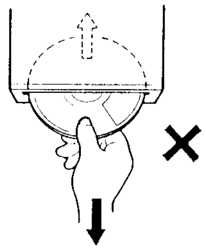
PROPER CARE OF YOUR DISC

- **Proper Handling**
  Handle your disc as shown. Do not drop the disc while handling. Hold the disc so you will not leave fingerprints on the surface. If the surface is scratched, it may cause the pickup to skip signal tracks. Do not affix tape, paper, or gummed labels on the disc. Do not write on the disc.



- **Keep Your Discs Clean**
  Fingerprints, dust, or soil on the surface could cause the pickup to skip signal tracks. Wipe the surface clean with a clean soft cloth. If the surface is heavily soiled, dampen a clean soft cloth in a solution of mild neutral detergent to wipe it clean. See drawing.
- **Damaged Disc**
  Do not attempt to play damaged, warped or cracked discs. It could severely damage the playback mechanism.
- **Storage**
  When not in use, place your discs in their individual case and store them in a cool place away from the sun, heat, and dust.
- Do not grip or pull out the disc with your hand while the disc is being pulled into the unit by Self Loading mechanism.





Disassembly Instructions

<Cabinet Section>

1. Removal of Nosepiece

(1) After removal of the top cover, remove two screws marked "○" and two hooks (A) as shown in Figures 3 and 4.

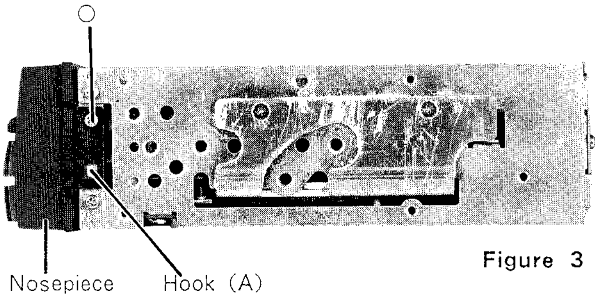

○
Nosepiece
Hook (A)

Figure 3

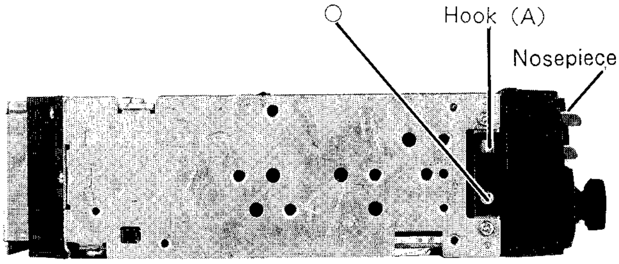

○
Hook (A)
Nosepiece

Figure 4

2. Removal of CD Deck

(1) After removal of Nosepiece, remove the solder (A) and five screws marked "△" as shown in Figure 5.

(2) Disconnect parallel wire from the Main P. C. Board.

3. Removal of Front P. C. Board

(1) After removal of CD Deck, remove the solder (B) and two screws marked "●" as shown in Figures 5 and 7.

(2) Disconnect parallel wire from the Audio P. C. Board.

4. Removal of Main P. C. Board

(1) After removing Front P. C. Board, remove the solder (c) as shown in Figure 6.

(2) Remove four screws marked "□" and two hooks (B) as shown in Figure 6.

(3) Disconnect all wires from the Main P. C. Board.

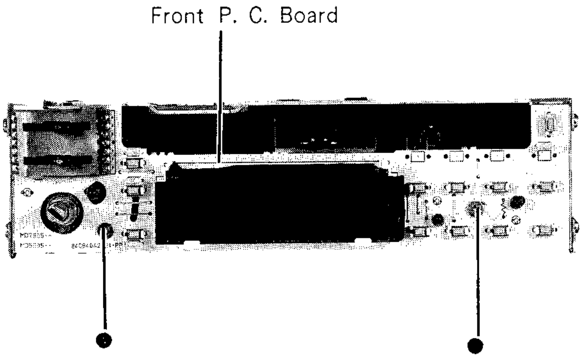

Front P. C. Board
●
●

Figure 7

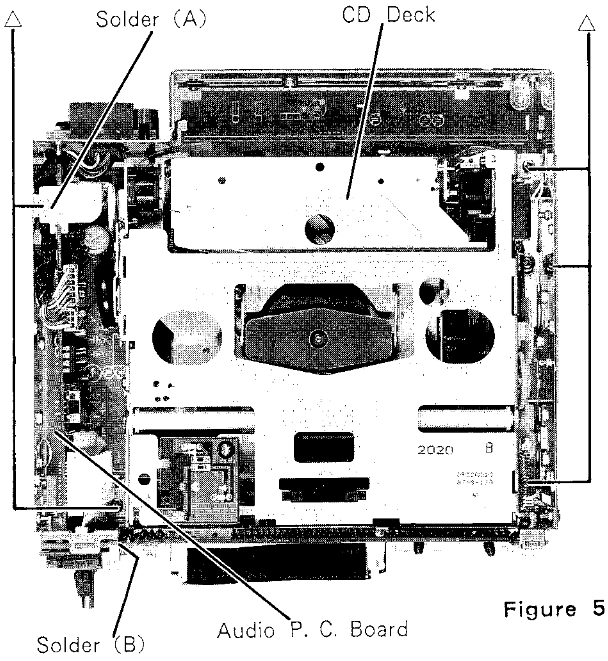

△
Solder (A)
CD Deck
△
Solder (B)
Audio P. C. Board

Figure 5

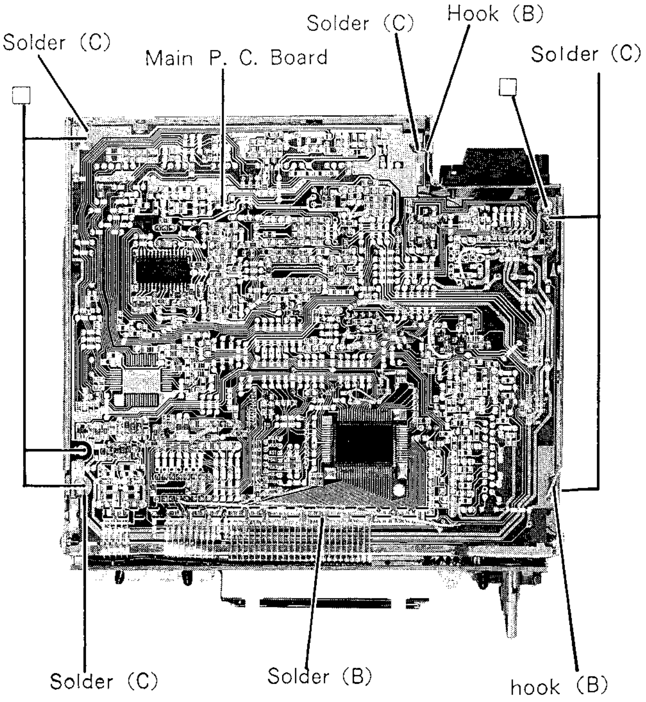

Solder (C)
□
Main P. C. Board
Solder (C)
Hook (B)
Solder (C)
□
Solder (C)
Solder (B)
hook (B)

Figure 6

<CD Mechanism Section>

1. Removal of Main P. C. Board (DP)

(1) Desolder 3 places (a) and remove two screws marked "○" as shown in Figure 8.

(2) Remove all wire leads coming from the Main P. C. Board (DP).

Note :Take care not to cut the parallel wire A when desoldering 3 places (a).

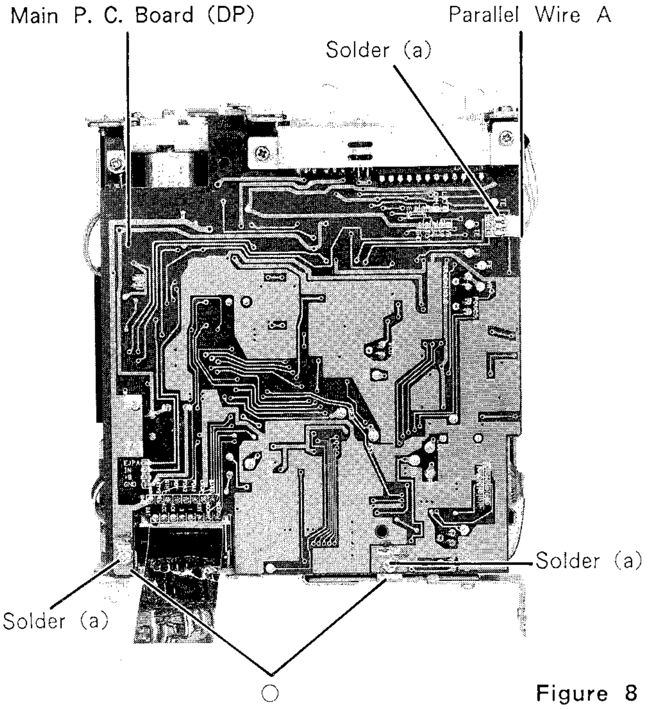

Main P. C. Board (DP)
Parallel Wire A
Solder (a)
Solder (a)
Solder (a)
○

Figure 8

2. Removal of Photo P. C. Board

(1) After removal of Main P. C. Board (DP), remove two screws marked "×" as shown in Figures 9 and 12.

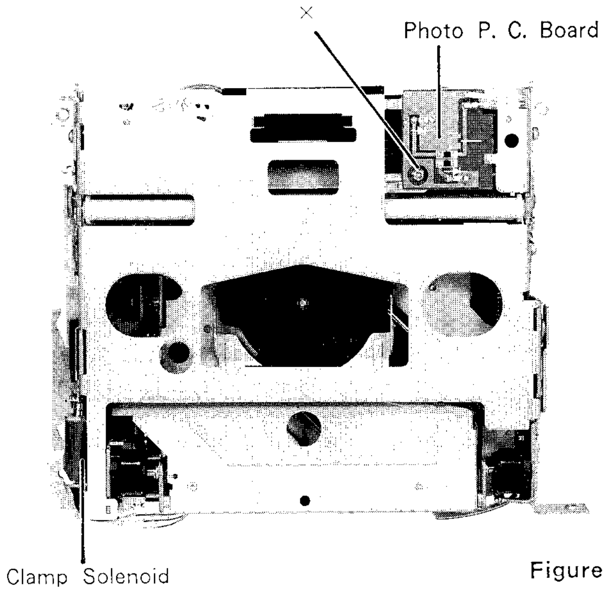

×
Photo P. C. Board
Clamp Solenoid

Figure 9

3. Removal of End Switch (A) P. C. Board

(1) After removing Main P. C. Board (DP), remove two screws marked "◎" as shown in Figure 10.

(2) Remove two wires coming from the clamp solenoid.

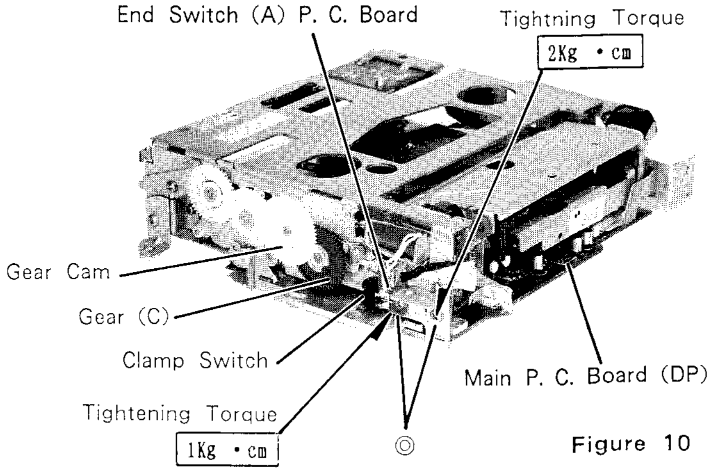

End Switch (A) P. C. Board
Tightning Torque
2Kg ・cm
Gear Cam
Gear (C)
Clamp Switch
Tightening Torque
1Kg ・cm
◎
Main P. C. Board (DP)

Figure 10

4. Removal of Pick-up Arm Unit

(1) Remove gear cam and gear (C) as shown in Figure 10.

(2) Remove five screws marked "※" as shown in Figure 11.

(3) Pick-up Arm Unit can be removed together with rivet loading bracket assembly.

Note :Gear cam and gear (C) are mounted with washers, do not loose washers.

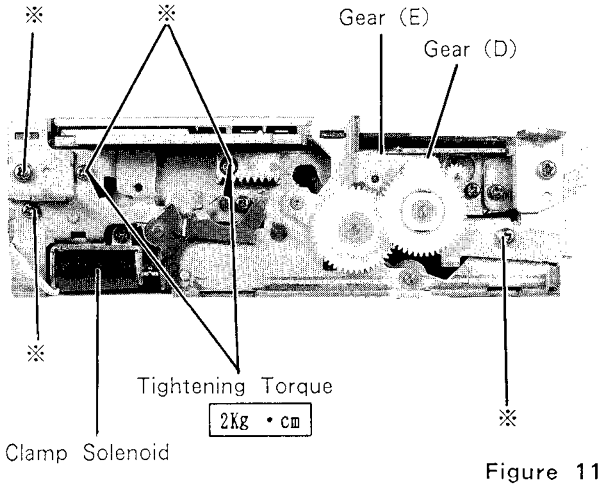

※
※
Gear (E)
Gear (D)
※
Tightening Torque
2Kg ・cm
※
Clamp Solenoid

Figure 11

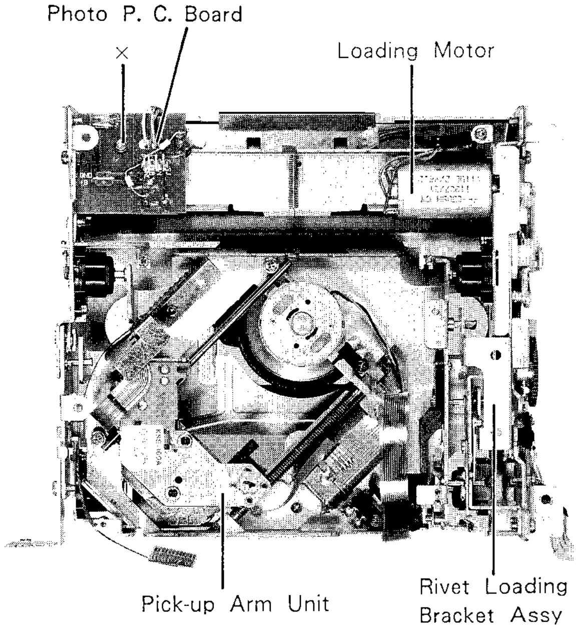


Photo P. C. Board
×
Loading Motor
Pick-up Arm Unit
Rivet Loading
Bracket Assy

Figure 12

5. Removal of Rivet Loading Bracket Assembly

(1) After dismounting pick-up arm unit, remove rivet loading bracket assembly by pulling it toward you and twisting in direction of arrow as shown in Figure 13.

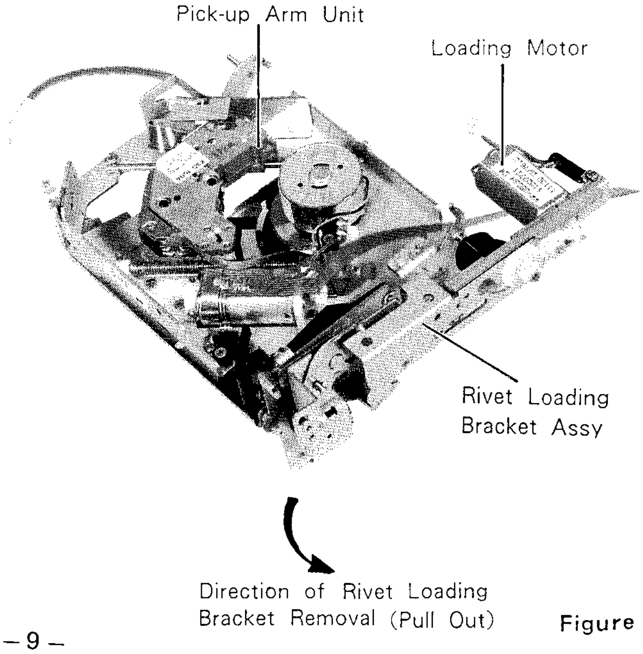

Pick-up Arm Unit
Loading Motor
Rivet Loading
Bracket Assy
Direction of Rivet Loading
Bracket Removal (Pull Out)

Figure 13

6. Removal of Rivet Unit

(1) After removing rivet loading bracket, remove solder (c) refering to Figure 14.

(2) Remove 3 screws (◆) shown in Figure 14.

7. Removal of Sled Motor

(1) After dismounting head unit, remove solder (b) shown in Figure 14.

(2) Remove 3 screws (◇) as shown in Figure 14.

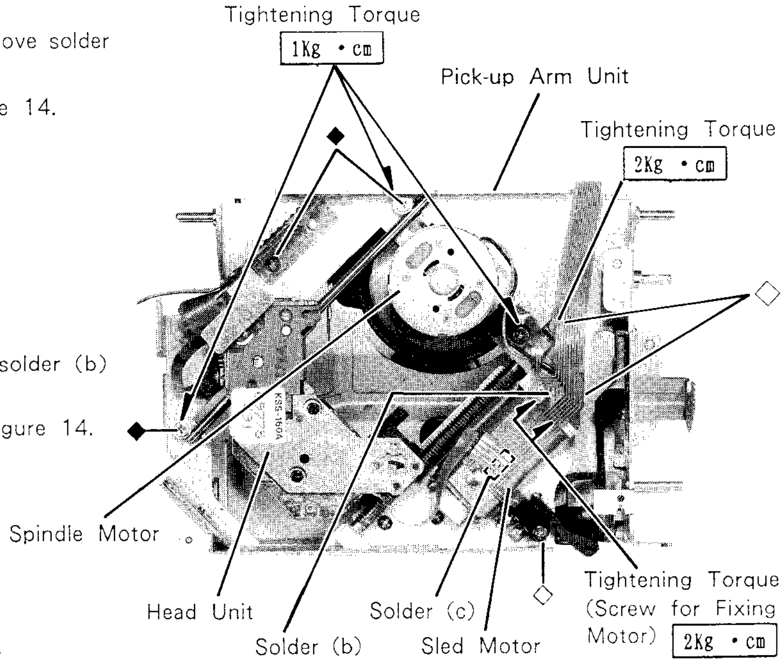

Tightening Torque
1Kg · cm
Pick-up Arm Unit
Tightening Torque
2Kg · cm
◆
◇
◆
Spindle Motor
Head Unit
Solder (b)
Solder (c)
Sled Motor
◇
Tightening Torque (Screw for Fixing Motor)
2Kg · cm

Figure 14

8. Removal of Rivet Loading Cam Assy.

(1) After dismounting rivet loading bracket assy, remove gears (D) and (E) as shown in Figure 11.

(2) Remove one washer shown in Figure 15.

Note :1) Do not loose washer.

2) Remove washer by removing spring at the same time as shown in Figure 16.

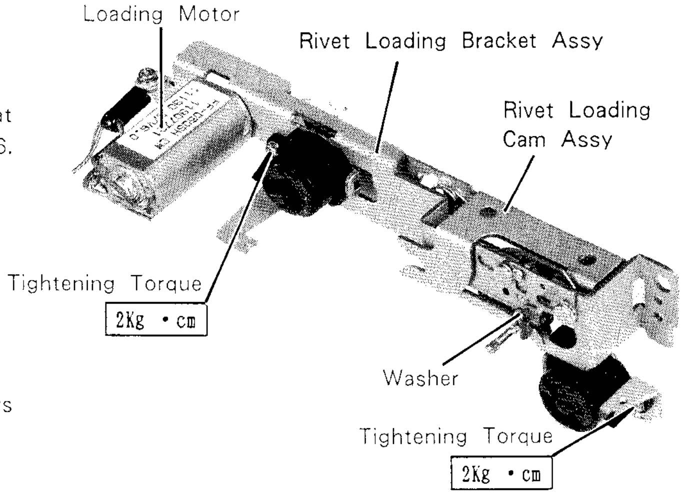

Loading Motor
Rivet Loading Bracket Assy
Rivet Loading Cam Assy
Tightening Torque
2Kg · cm
Washer
Tightening Torque
2Kg · cm

Figure 15

9. Removal of Loading Motor

(1) After removing rivet loading cam, remove 2 screws (△) as shown in Figure 16.

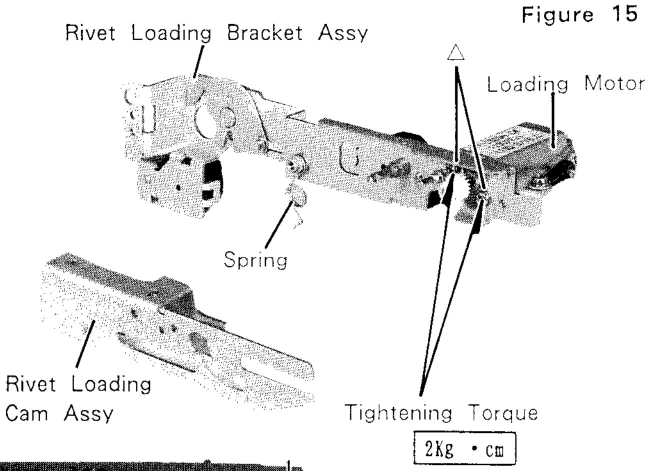

Rivet Loading Bracket Assy
△
Loading Motor
Spring
Rivet Loading Cam Assy
Tightening Torque
2Kg · cm

Figure 16

※Caution on Replacing Spindle Motor

1) When mounting spindle motor on pick-up arm unit, fix with a screw at tightening torque of 1.5kg/cm.

2) By pinching gauge, press and insert spindle table into spindle motor shaft. Check to be sure that height of inserted spindle table is 1.55±0.05mm.

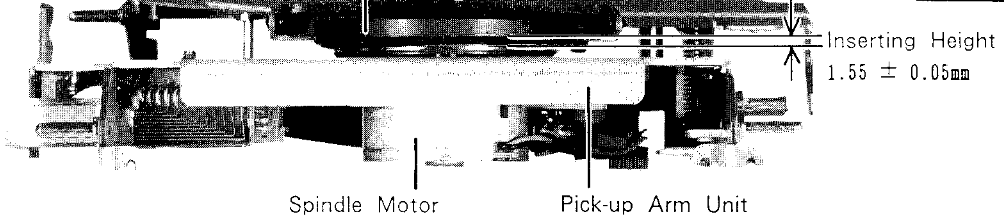

Spindle Table
Inserting Height
1.55 ± 0.05mm
Spindle Motor
Pick-up Arm Unit

Figure 17

Adjustment Procedures

1. Compact Disc

(1) Connections

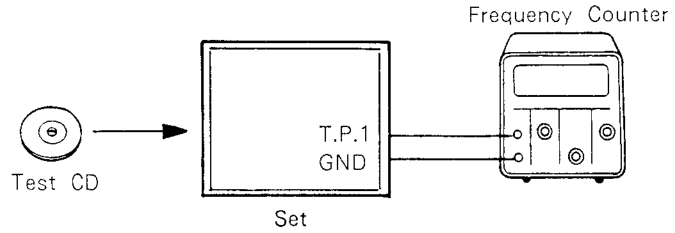

Frequency Counter
T.P.1
GND
Test CD
Set

Figure 18

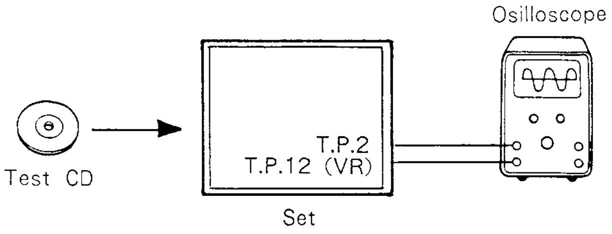

Osilloscope
T.P.2
T.P.12 (VR)
Test CD
Set

Figure 19

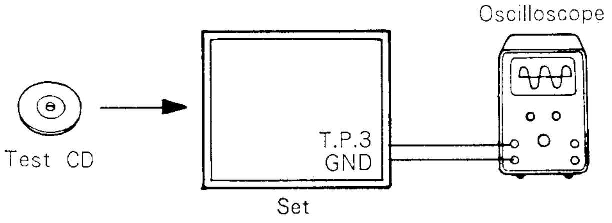

Oscilloscope
T.P.3
GND
Test CD
Set

Figure 20

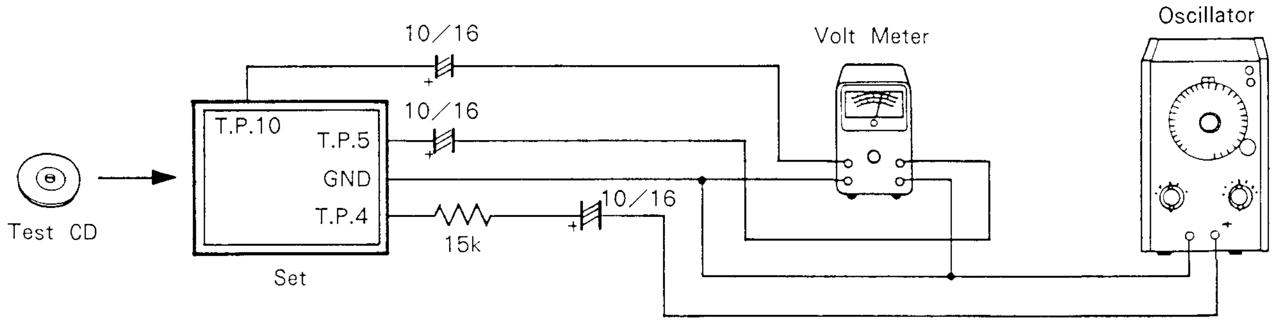

10/16
10/16
Volt Meter
Oscillator
T.P.10
T.P.5
GND
T.P.4
15k
10/16
Test CD
Set

Figure 21

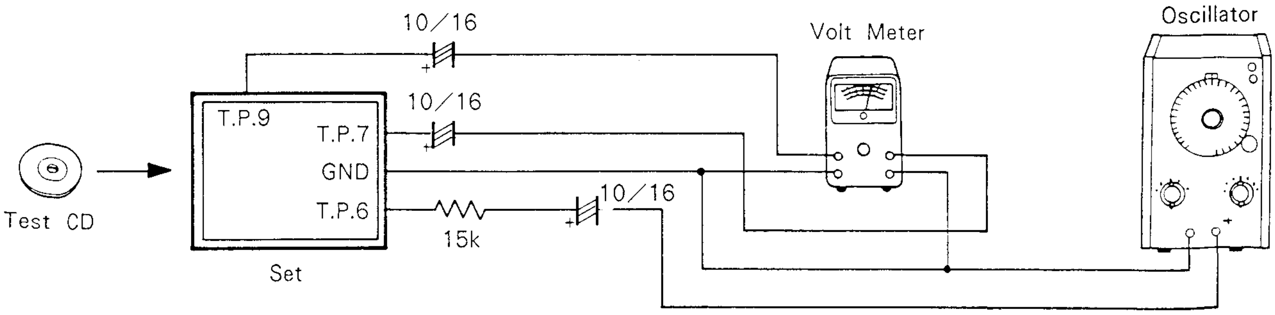

10/16
10/16
Volt Meter
Oscillator
T.P.9
T.P.7
GND
T.P.6
15k
10/16
Test CD
Set

Figure 22

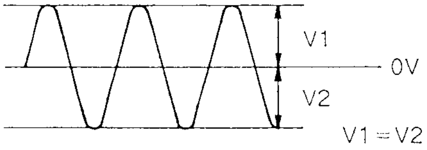
(2) Switch Settings

Power Switch ································ON

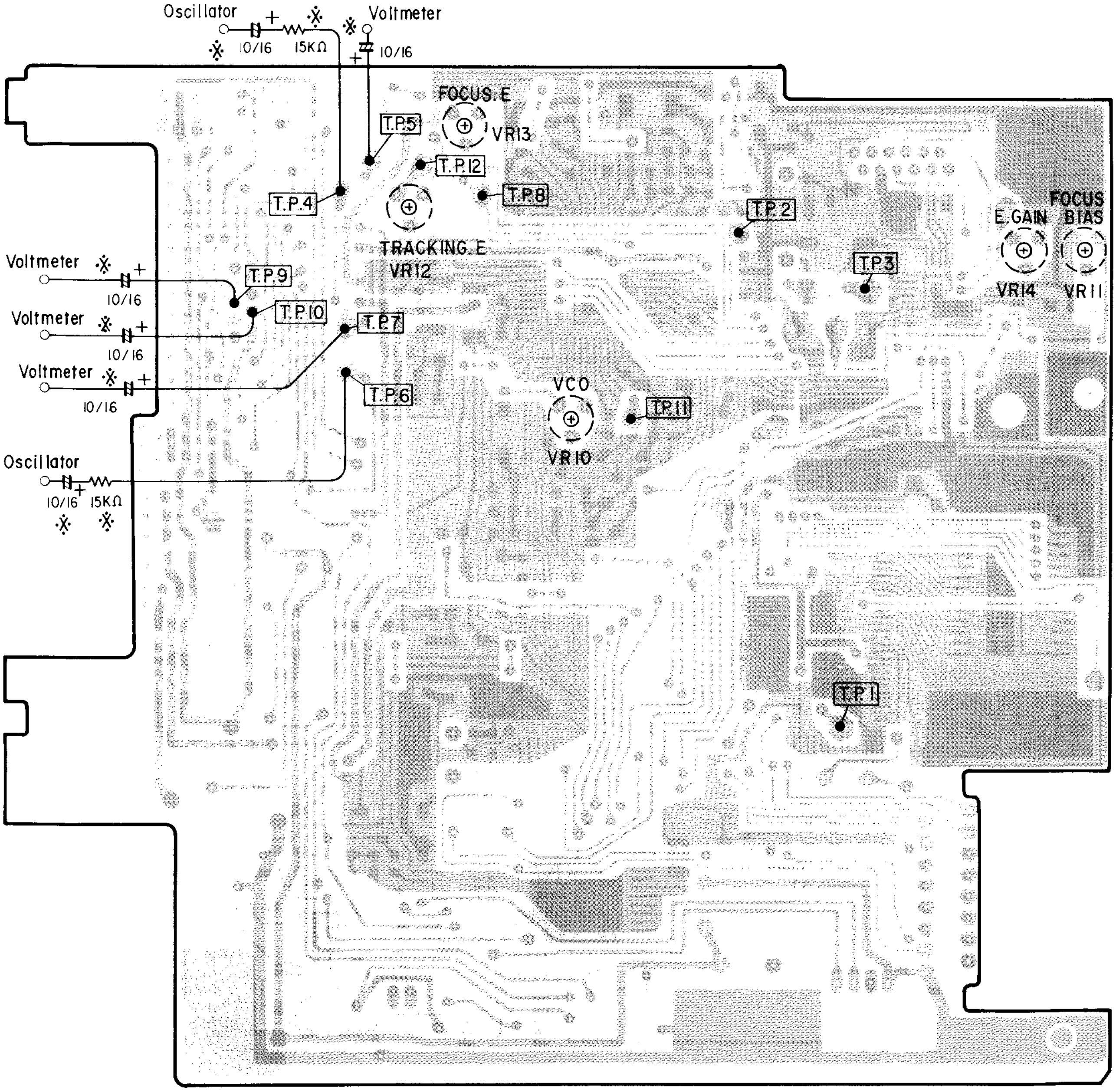
Play/Pause Switch ···························ON

Other Switches ·······························OFF

(3) Adjustment Procedures

Step	Description	Connection	Oscillator	Test Point	Adjustment
1	VCO Adjustment	Figure 18	–	T.P.1 T.P.11 T.P.12	In playback mode, connect T.P.11 to VR (T.P.12), and adjust VR010 so that the frequency is 4.32MHz±30kHz.
2	Tracking Balance Adjustment	Figure 19	–	T.P.2	In playback mode, connect T.P.8 to VR (T.P.12), and adjust VR014 so that the oscilloscope waveform is symmetrial above and below, relative to 0V. 
3	Focus Balance Adjustment	Figure 20	–	T.P.3	Adjust VR011 so that the amplitude of oscilloscope waveform is maximum.
4	Focus Gain Adjustment	Figure 21	1kHz 150mV (P-P)	T.P.4 T.P.5 T.P.10	Adjust VR013 so that T.P.10 against T.P.5 is 1V (P-P).
5	Tracking Gain Adjustment	Figure 22	2.4kHz 400mV (P-P)	T.P.6 T.P.7 T.P.9	Adjust VR202 so that T.P.10 against T.P.5 is +6dB.

Adjustment Locations

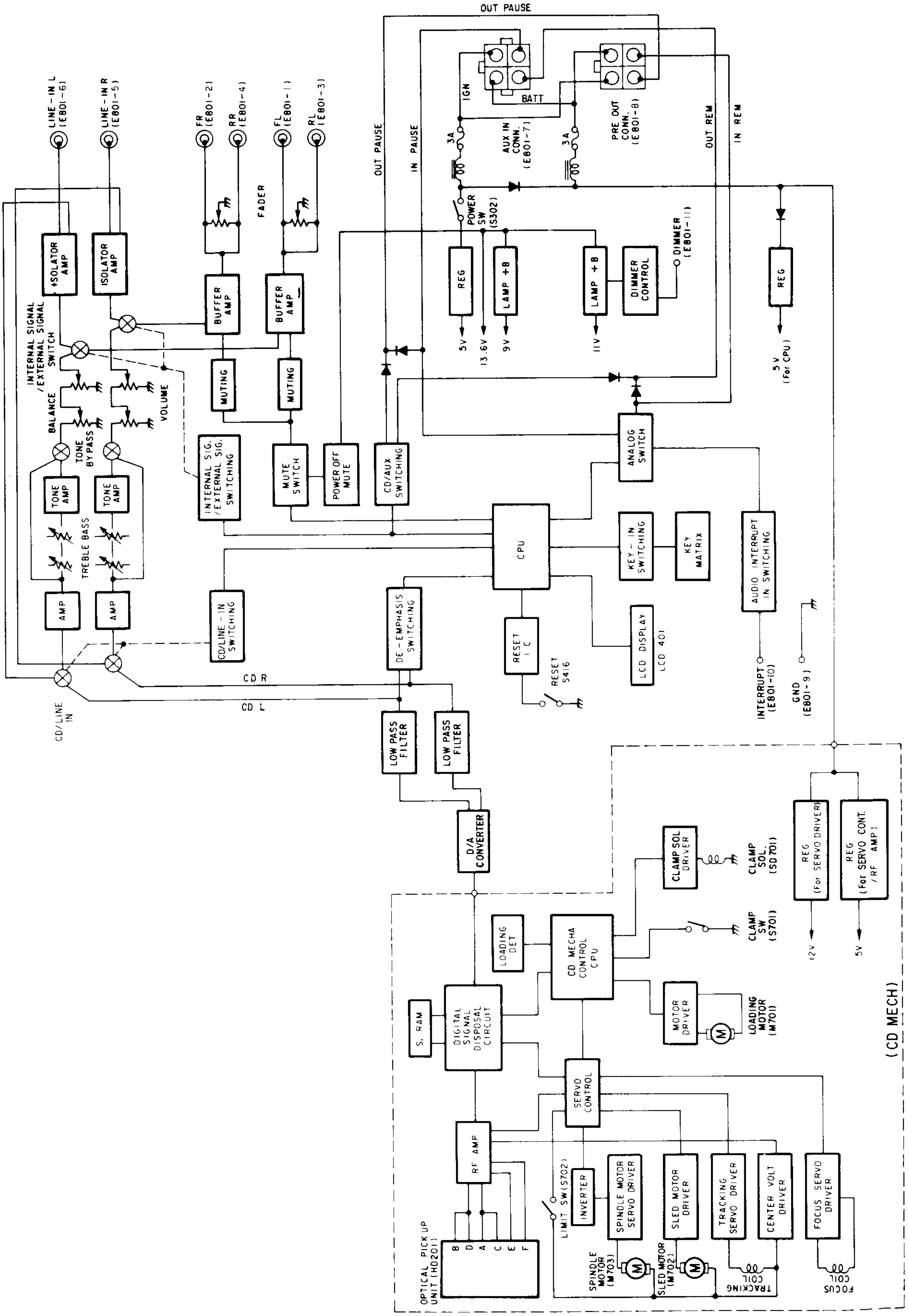

Oscillator
10/16
15KΩ
Voltmeter
10/16
T.P.5
FOCUS.E
VR13
T.P.12
T.P.4
T.P.8
TRACKING.E
VR12
T.P.2
E.GAIN
FOCUS BIAS
VR14
VR11
T.P.3
Voltmeter
10/16
T.P.9
T.P.10
Voltmeter
10/16
T.P.7
Voltmeter
10/16
T.P.6
VCO
VR10
T.P.11
Oscillator
10/16
15KΩ
T.P.1

※Parts marked are used for adjustment only.
Always remove the parts after the adjustment.

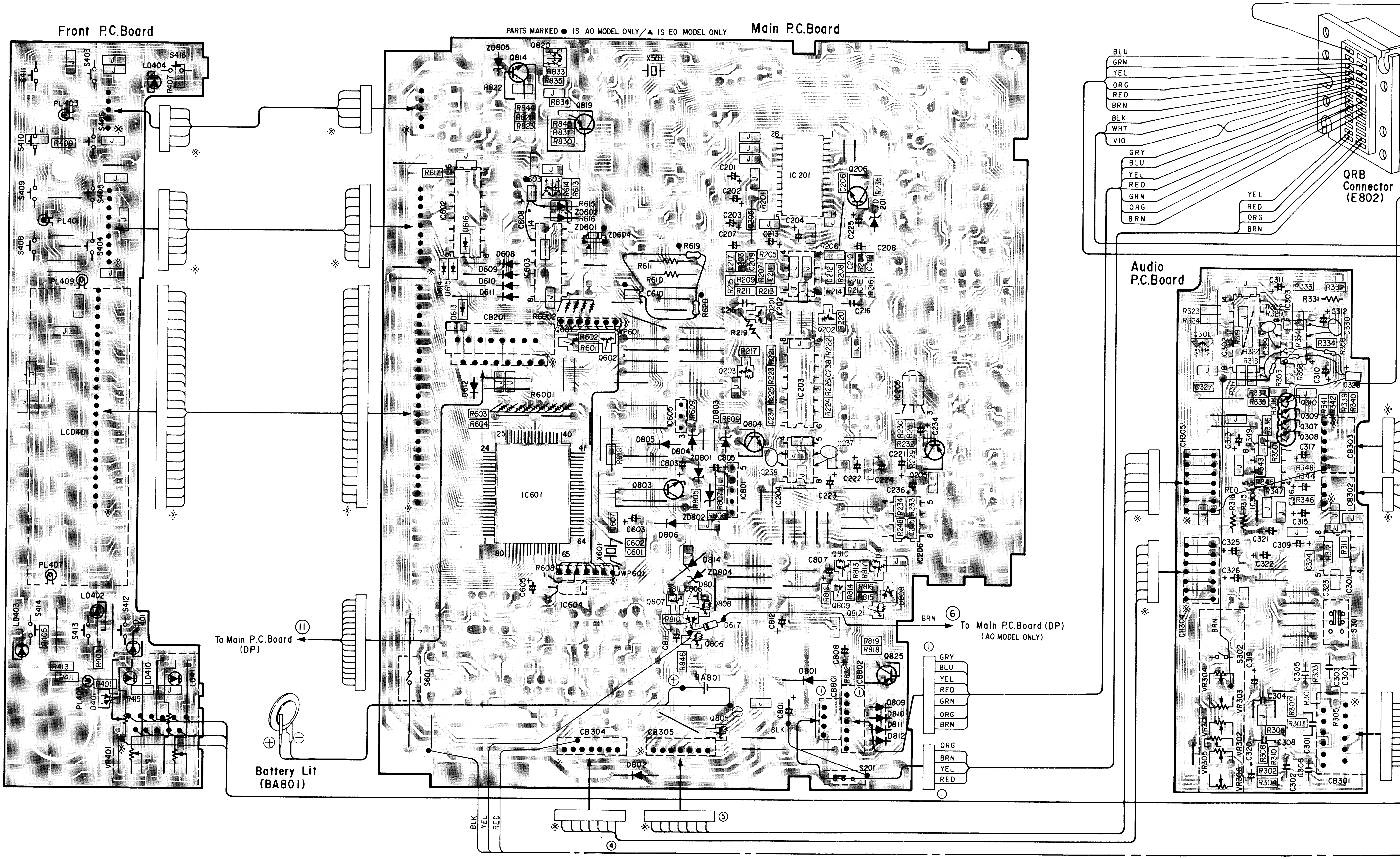
Main P. C. Board (DP)

(Foil Side View)

Block Diagram


OUT PAUSE
BATT
IGN
3A
AUX IN CONN. (E801-7)
PRE OUT CONN. (E801-8)
OUT REM
IN REM
OUT PAUSE
IN PAUSE
POWER SW (S302)
DIMMER (E801-11)
REG
LAMP +B
DIMMER CONTROL
5V
13.6V
9V
11V
5V (For CPU)
LINE-IN L (E801-6)
LINE-IN R (E801-5)
FR (E801-2)
RR (E801-4)
FL (E801-1)
RL (E801-3)
FADER
ISOLATOR AMP
BUFFER AMP
MUTING
INTERNAL SIGNAL /EXTERNAL SIGNAL SWITCH
BALANCE
VOLUME
TONE BYPASS
TONE AMP
TREBLE BASS
AMP
INTERNAL SIG. /EXTERNAL SIG. SWITCHING
MUTE SWITCH
POWER OFF MUTE
CD/AUX SWITCHING
ANALOG SWITCH
CPU
KEY-IN SWITCHING
KEY MATRIX
AUDIO INTERRUPT IN SWITCHING
CD/LINE-IN SWITCHING
DE-EMPHASIS SWITCHING
RESET IC
RESET S416
LCD DISPLAY LCD 401
INTERRUPT (E801-10)
GND (E801-9)
CD/LINE IN
CD R
CD L
LOW PASS FILTER
D/A CONVERTER
REG (For SERVO DRIVER)
REG (For SERVO CONT. /RF AMP)
12V
5V
CLAMP SOL DRIVER
CLAMP SOL. (SD701)
CLAMP SW (S701)
LOADING DET
CD MECHA CONTROL CPU
MOTOR DRIVER
LOADING MOTOR (M701)
S. RAM
DIGITAL SIGNAL DISPOSAL CIRCUIT
SERVO CONTROL
RF AMP
LIMIT SW (S702)
INVERTER
SPINDLE MOTOR SERVO DRIVER
SLED MOTOR DRIVER
TRACKING SERVO DRIVER
CENTER VOLT DRIVER
FOCUS SERVO DRIVER
OPTICAL PICK UP UNIT (H0201)
B
D
A
C
E
F
SPINDLE MOTOR (M703)
SLED MOTOR (M702)
TRACKING COIL
FOCUS COIL
(CD MECH)

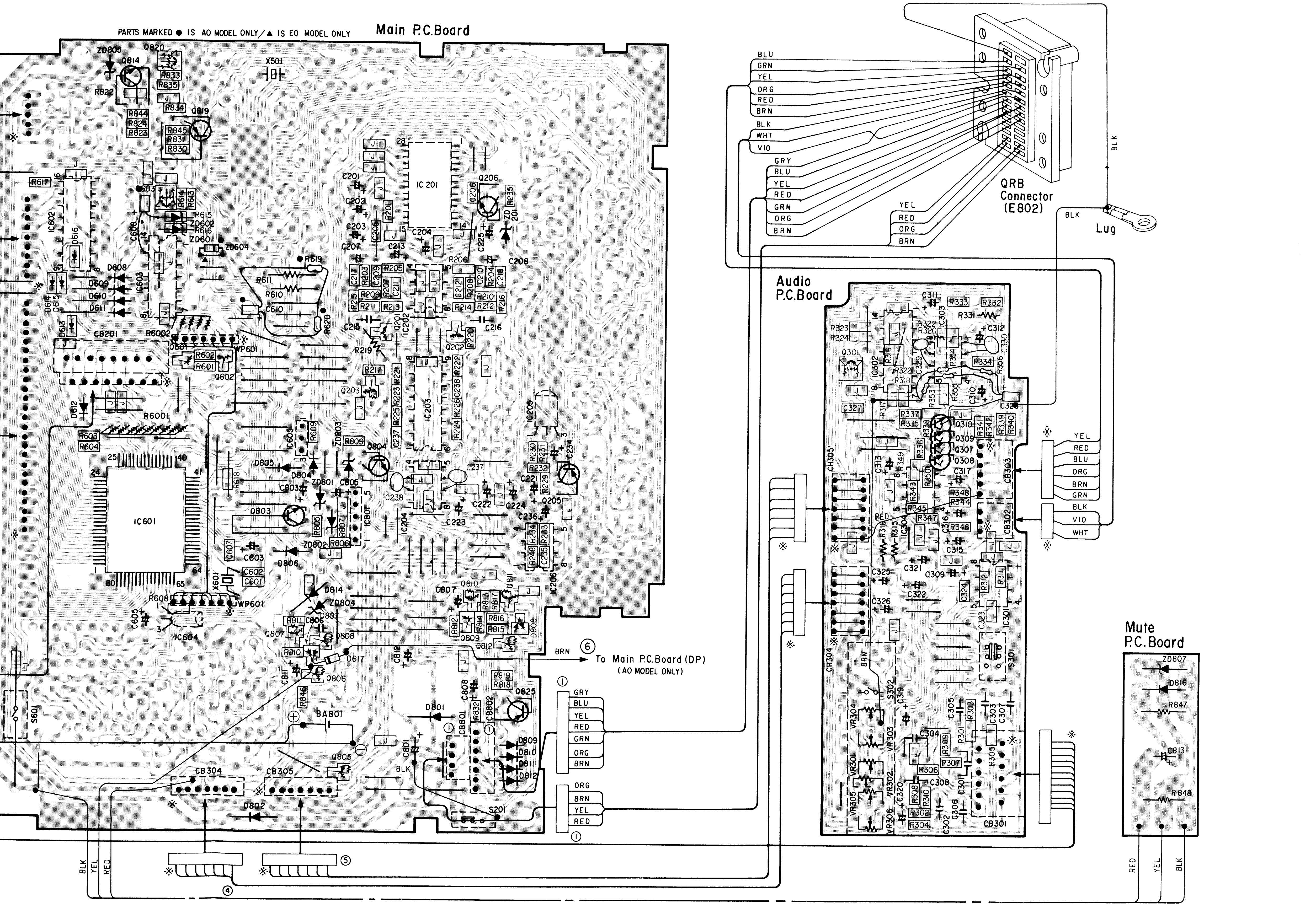
Parts Layout on P.C. Boards and Wiring Diagram (1/2)


PARTS MARKED ● IS AO MODEL ONLY / ▲ IS EO MODEL ONLY

Front P.C.Board
Main P.C.Board
Audio P.C.Board
QRB Connector (E802)
To Main P.C.Board (DP) ⑪
BRN ⑥ To Main P.C.Board (DP)
(AO MODEL ONLY)
Battery Lit (BA801)
LCD401
IC601
IC201
IC203
IC602
IC604
IC301
CB201
CB304
CB305
CB301
CB302
CB303
CH304
CH305
X501
X601
BA801
S201
S601
S301
VR401
VR301
VR302
VR303
VR304
VR305
VR306
BLU
GRN
YEL
ORG
RED
BRN
BLK
WHT
VIO
GRY
④
⑤
①

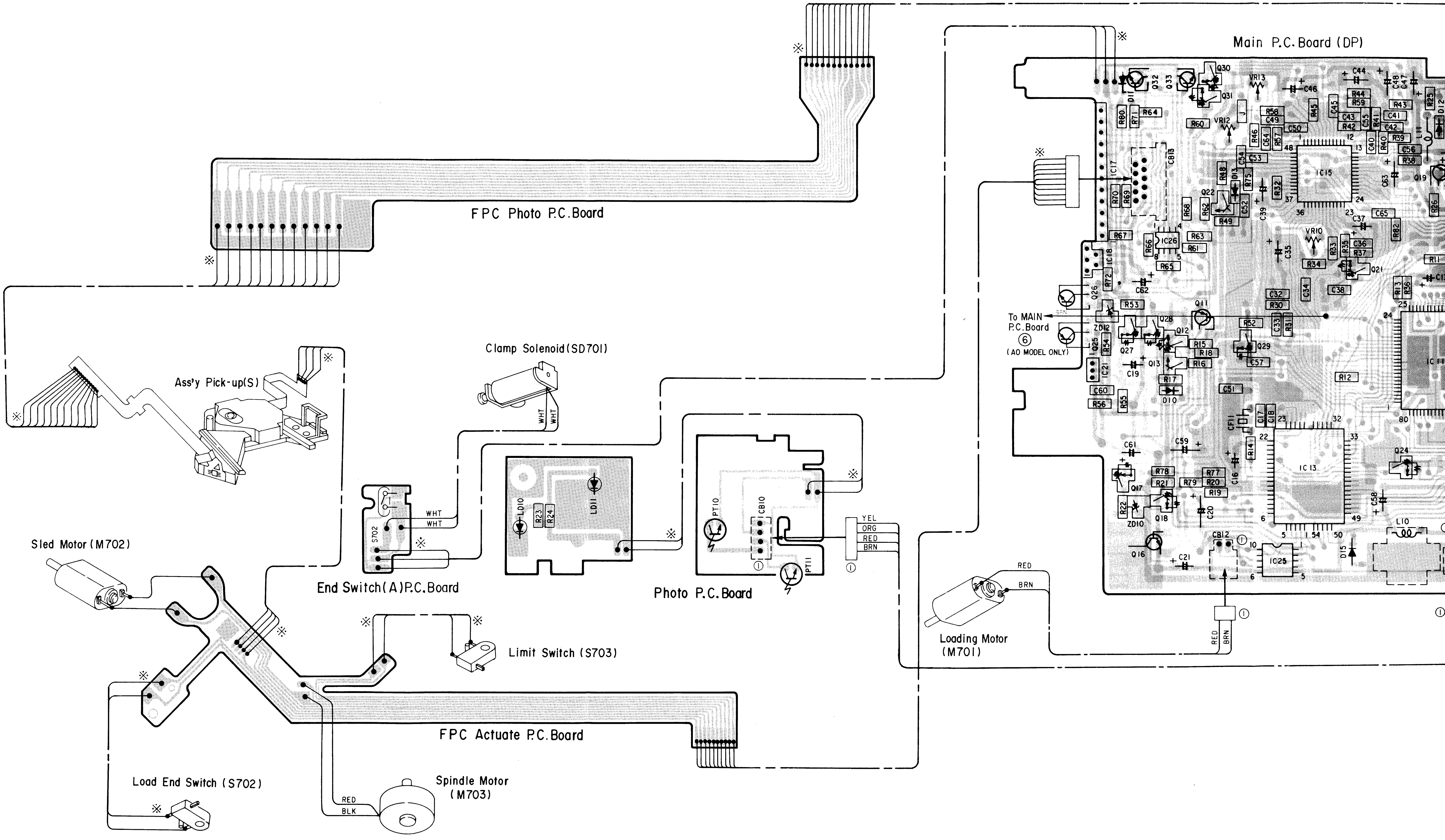
gram (1/2)

PARTS MARKED ● IS AO MODEL ONLY/▲ IS EO MODEL ONLY

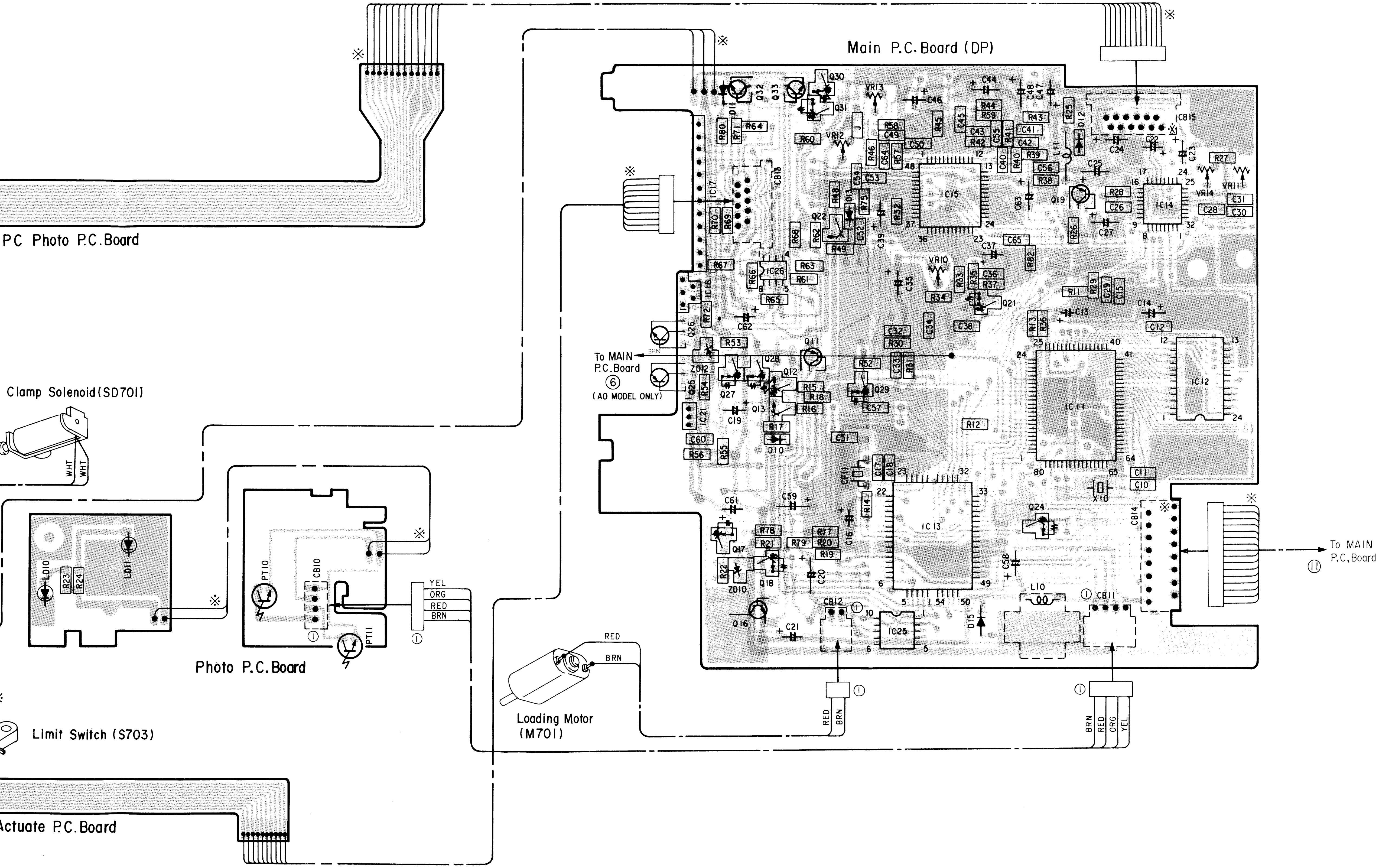

Main P.C.Board
Audio P.C.Board
Mute P.C.Board
QRB Connector (E802)
Lug
BLK
To Main P.C.Board (DP) (AO MODEL ONLY)
BRN
⑥
①
④
⑤
IC601
IC201
IC203
IC602
IC603
IC604
IC202
IC204
IC205
IC206
IC801
IC301
IC302
IC303
IC304
X501
X601
BA801
S601
S201
S301
S302
CB201
CB301
CB302
CB303
CB304
CB305
CH304
CH305
WP601
VR301
VR302
VR303
VR304
VR305
VR306
ZD807
D816
R847
C813
R848
BLU
GRN
YEL
ORG
RED
BRN
BLK
WHT
VIO
GRY
※

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

Parts Layout on P.C. Boards and Wiring Diagram (2/2)


Main P.C. Board (DP)
FPC Photo P.C. Board
Ass'y Pick-up(S)
Clamp Solenoid (SD701)
WHT
WHT
To MAIN P.C. Board ⑥ (AO MODEL ONLY)
BRN
End Switch (A) P.C. Board
S702
Photo P.C. Board
CB10
PT10
PT11
LD10
LD11
R23
R24
YEL
ORG
RED
BRN
Sled Motor (M702)
Limit Switch (S703)
Loading Motor (M701)
RED
BRN
FPC Actuate P.C. Board
Load End Switch (S702)
Spindle Motor (M703)
RED
BLK
IC13
IC15
IC17
IC18
IC25
IC26
CB12
CB13
※
①

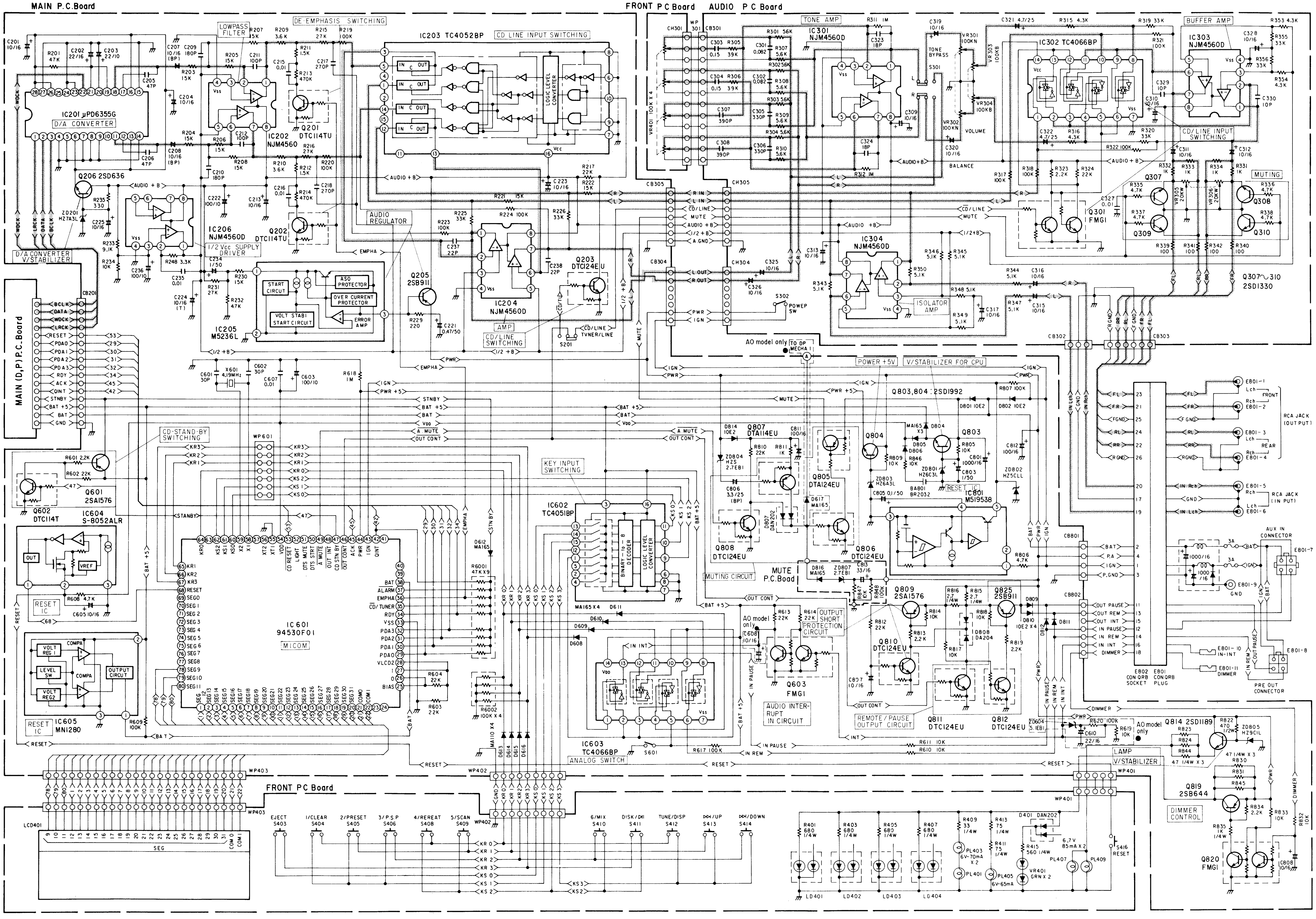
agram (2/2)


Main P.C. Board (DP)
PC Photo P.C.Board
Clamp Solenoid (SD701)
WHT
WHT
LD10
LD11
R23
R24
PT10
PT11
CB10
YEL
ORG
RED
BRN
Photo P.C. Board
Limit Switch (S703)
Actuate P.C. Board
Motor
3)
RED
BRN
Loading Motor
(M701)
To MAIN
P.C.Board
⑥
(AO MODEL ONLY)
To MAIN
P.C.Board
⑪
IC11
IC12
IC13
IC14
IC15
IC17
IC18
IC21
IC25
IC26
CB11
CB12
CB13
CB14
CB15
Q11
Q12
Q13
Q16
Q17
Q18
Q19
Q21
Q22
Q24
Q25
Q26
Q27
Q28
Q29
Q30
Q31
Q32
Q33
VR10
VR11
VR12
VR13
VR14
L10
L11
X10
CF11
D10
D11
D12
D13
D15
ZD10
ZD12
RED
BRN
BRN
RED
ORG
YEL
①
※

BLU	Blue
GRN	Green
BLK	Black
GRY	Gray
WHT	White
RED	Red
BRN	Brown
ORG	Orange
YEL	Yellow
PNK	Pink
VIO	Violet
GRN/WHT	Green/White
GRY/WHT	Gray/White
GRY/YEL	Gray/Yellow
GRN/YEL	Green/Yellow
SHLD	Shield

Schematic Diagram (1/2)

IC	IC604 IC605	IC201	IC206	IC202	IC205 IC601	IC203	IC204	IC602 IC603	IC301 IC304	IC801	IC302	IC303
Transistor(Q)	Q602	Q206 Q601	Q201 Q202	Q205	Q203	Q808	Q807	Q805, Q806 Q603	Q804	Q803 Q809,Q810 Q811	Q825 Q812	Q301 Q307 Q309 Q308, Q310 Q814, Q819 Q820


MAIN P.C.Board
FRONT P C Board
AUDIO P C Board
IC201 μPD6355G
D/A CONVERTER
D/A CONVERTER V/STABILIZER
LOWPASS FILTER
DE-EMPHASIS SWITCHING
IC202 NJM4560
IC203 TC4052BP
CD LINE INPUT SWITCHING
LOGIC LEVEL CONVERTER
IC206 NJM4560D
1/2 Vcc SUPPLY DRIVER
IC205 M5236L
START CIRCUIT
ASO PROTECTOR
OVER CURRENT PROTECTOR
VOLT STABI START CIRCUIT
ERROR AMP
AUDIO REGULATOR
IC204 NJM4560D
AMP
CD/LINE SWITCHING
Q201 DTC114TU
Q202 DTC114TU
Q203 DTC124EU
Q205 2SB911
Q206 2SD636
S201
TUNER/LINE
MAIN (D,P) P.C.Board
CD-STAND-BY SWITCHING
Q601 2SA1576
Q602 DTC114T
IC604 S-8052ALR
RESET IC
IC605 MN1280
VOLT REG1
VOLT REG2
LEVEL SW
COMPA
OUTPUT CIRCUIT
IC601 94530F01
MICOM
X601 4.19MHz
WP601
IC602 TC4051BP
KEY INPUT SWITCHING
BINARY-1 ~ 8 DECODER
LOGIC LEVEL CONVERTER
IC603 TC4066BP
ANALOG SWITCH
S601
TONE AMP
IC301 NJM4560D
TONE BYPASS
S301
VR301 100KN
VR302 100KN
VR303 100KB
VR304 100KB
VOLUME
BALANCE
IC302 TC4066BP
IC303 NJM4560D
BUFFER AMP
CD/LINE INPUT SWITCHING
MUTING
Q301 FMG1
Q307~310 2SD1330
IC304 NJM4560D
ISOLATOR AMP
S302 POWER SW
AO model only
TO DP MECHA
POWER +5V
V/STABILIZER FOR CPU
Q803,804 : 2SD1992
Q807 DTA114EU
Q805 DTA124EU
Q808 DTC124EU
Q806 DTC124EU
IC801 M51953B
RESET IC
MUTE P.C.Board
MUTING CIRCUIT
Q809 2SA1576
Q825 2SB911
Q810 DTC124EU
OUTPUT SHORT PROTECTION CIRCUIT
Q603 FMG1
AUDIO INTER-RUPT IN CIRCUIT
REMOTE/PAUSE OUTPUT CIRCUIT
Q811 DTC124EU
Q812 DTC124EU
Q814 2SD1189
LAMP V/STABILIZER
Q819 2SB644
DIMMER CONTROL
Q820 FMG1
E802 CON QRB SOCKET
E801 CON QRB PLUG
RCA JACK (OUT PUT)
FRONT
REAR
RCA JACK (IN PUT)
AUX IN CONNECTOR
PRE OUT CONNECTOR
LCD401
SEG
COM 0
COM 1
WP403
WP402
WP401
EJECT S403
1/CLEAR S404
2/PRESET S405
3/P.S.P S406
4/REREAT S408
5/SCAN S409
6/MIX S410
DISK/DH S411
TUNE/DISP S412
UP S413
DOWN S414
S416 RESET
LD401
LD402
LD403
LD404
PL401
PL403 6V-70mA X2
PL405 6V-65mA
PL407
PL409
VR401 GRN X 2

IC201		
1		8
2		9
3		10
4	0V	11
5	0V	12
6	6.2V	13
7	0V	14

IC202	
1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC203	
1	4.5V
2	(4.5V)/0.2V
3	4.5V
4	0.2V
5	4.5V
6	0V
7	0V
8	0V

IC204	
1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

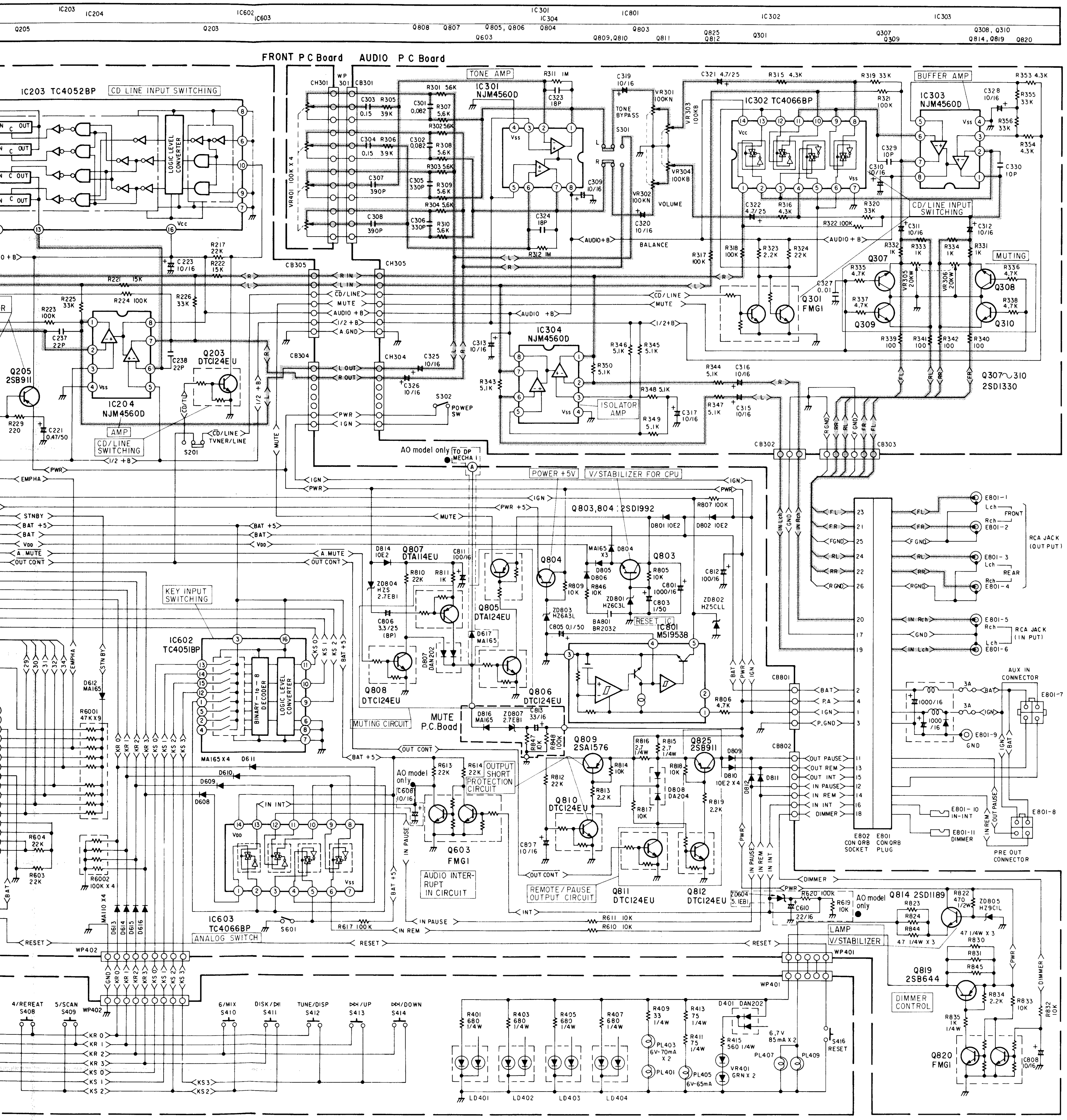
IC206	
1	4.5V
2	4.5V
3	4.5V
4	0V
5	1.3V
6	1.1V
7	8V
8	8.5V

IC301		
1	4.5V	5
2	4.5V	6
3	4.5V	7
4	0V	8

IC302			
1	4.5V	8	
2	4.5V	9	
3	4.5V	10	
4	4.5V	11	
5	7.7V/0V	12	0
6	7.7V/0V	13	0
7	0V	14	

IC601		
1		21
2		22
3		23
4		24
5		25
6		26
7		27
8		28
9		29
10		30
11		31
12		32
13		33
14		34
15		35
16		36
17		37
18		38
19		39
20		40

model ※	● North American model only	▲ European model only
R619	10K ohm	Not Used
R620	100K ohm	Not Used
C608	10μF/16V	Not Used
C610	22μF/16V	Not Used
D617	MA165	Not Used
ZD604	HZS5.1EB1	Not Used
IC601	94530F02	94530F04


FRONT P C Board
AUDIO P C Board
IC203 TC4052BP
CD LINE INPUT SWITCHING
LOGIC LEVEL CONVERTER
IC301 NJM4560D
TONE AMP
TONE BYPASS
VOLUME
BALANCE
IC302 TC4066BP
IC303 NJM4560D
BUFFER AMP
CD/LINE INPUT SWITCHING
MUTING
IC304 NJM4560D
ISOLATOR AMP
IC204 NJM4560D
AMP
CD/LINE SWITCHING
Q203 DTC124EU
Q205 2SB911
Q307～310 2SD1330
Q301 FMG1
RCA JACK (OUT PUT)
RCA JACK (IN PUT)
FRONT
REAR
AUX IN CONNECTOR
PRE OUT CONNECTOR
E802 CON QRB SOCKET
E801 CON QRB PLUG
POWER +5V
V/STABILIZER FOR CPU
Q803,804 : 2SD1992
Q807 DTA114EU
Q805 DTA124EU
Q806 DTC124EU
Q808 DTC124EU
MUTING CIRCUIT
MUTE P.C.Boad
IC801 M519538
RESET IC
KEY INPUT SWITCHING
IC602 TC4051BP
BINARY-1of-8 DECODER
LOGIC LEVEL CONVERTER
IC603 TC4066BP
ANALOG SWITCH
Q603 FMG1
AUDIO INTER-RUPT IN CIRCUIT
OUTPUT SHORT PROTECTION CIRCUIT
Q809 2SA1576
Q810 DTC124EU
Q811 DTC124EU
Q812 DTC124EU
Q825 2SB911
REMOTE/PAUSE OUTPUT CIRCUIT
Q814 2SD1189
LAMP V/STABILIZER
Q819 2SB644
DIMMER CONTROL
Q820 FMG1
AO model only
4/REREAT S408
5/SCAN S409
6/MIX S410
DISK/DⅡ S411
TUNE/DISP S412
⏭/UP S413
⏮/DOWN S414
LD401
LD402
LD403
LD404

IC201

1		8	0V	15	0V	22	
2		9	0V	16	6.2V	23	0V
3		10	1.3V	17	2.6V/5.2V	24	0V
4	0V	11	2.6V/5.2V	18	2.6V/5.2V	25	0V
5	0V	12	2.6V/0V	19	3.6V	26	6.2V
6	6.2V	13	6.2V	20	2.6V	27	0V
7	0V	14	0V	21	3.6V	28	6.2V

IC202

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC205

1	13.7V
2	8.5V
3	13V

IC207

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC203

1	4.5V	9	8.5V/0V
2	(4.5V)/0.2V	10	8.5V/0V
3	4.5V	11	0.2V
4	0.2V	12	4.5V
5	4.5V	13	4.5V
6	0V	14	4.5V
7	0V	15	(4.5V)/0.2V
8	0V	16	8.5V

IC303

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

IC304

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

IC204

1	4.5V
2	4.5V
3	4.5V
4	0V
5	4.5V
6	4.5V
7	4.5V
8	8.5V

IC604

1	5V
2	5V
3	0V

IC605

1	5.1V
2	5.1V
3	0V

IC602

1		9	
2		10	
3	5.1V	11	
4		12	
5		13	
6	0V	14	5.2V/0V
7	0V	15	5.1V/0V
8	0V	16	5.1V

IC206

1	4.5V
2	4.5V
3	4.5V
4	0V
5	1.3V
6	1.1V
7	8V
8	8.5V

IC801

1	8.7V
2	0V
3	0V
4	1.2V
5	4.8V

IC603

1		8	
2		9	
3		10	
4		11	
5	5.1V/0V	12	5.2V/0V
6	5.2V/0V	13	5.1V/0V
7	0V	14	5.1V

IC301

1	4.5V	5	4.5V
2	4.5V	6	4.5V
3	4.5V	7	4.5V
4	0V	8	8.5V

IC302

1	4.5V	8	4.5V
2	4.5V	9	4.5V
3	4.5V	10	4.5V
4	4.5V	11	4.5V
5	7.7V/0V	12	0V/8.3V
6	7.7V/0V	13	0V/8.3V
7	0V	14	8.5V

IC601

1		21		41		61	
2		22		42		62	
3		23		43	4.8V	63	
4		24		44	5V	64	
5		25	5V	45		65	
6		26	5V	46	5.1V/0V	66	
7		27	2.5V	47	5.1V	67	
8		28	2.5V	48	5.1V/0V	68	5V
9		29		49	5.1V/0V	69	
10		30		50		70	
11		31		51	5V/0V	71	
12		32		52		72	
13		33	0V	53	5V	73	
14		34		54	5V	74	
15		35	1.9V/0V	55	0V	75	
16		36	1V/0V	56		76	
17		37		57		77	
18		38	5.1V	58		78	
19		39		59		79	
20		40		60		80	

model ※	● North American model only	▲ European model only
R619	10K ohm	Not Used
R620	100K ohm	Not Used
C608	10μF/16V	Not Used
C610	22μF/16V	Not Used
D617	MA165	Not Used
ZD604	HZS5.1EB1	Not Used
IC601	94530F02	94530F04

	E	C	B
Q601	0V	0V	5.1V
Q602	5.1V	5.1V	4.4V
Q603	0V	5.1V/0V	0V/2.9V
		0V/2.9V	13.7V/0V

	E	C	B	MODE
Q201	0V	0V/4.3V	1V/0V	ON/OFF
Q202	0V	0V/4.3V	1V/0V	ON/OFF
Q203	0V	8.5V/0V	0V/0.5V	CD/TU
Q205	13.7V	8.5V	13.1V	
Q206	6.2V	8.5V	6.8V	

	E	C	B	MODE
Q803	5.8V	13.3V	6.4V	
Q804	5V	13.7V	5.6V	
Q805	13.3V	0V/13.3V	13.3V/0V	ON/OFF
Q806	0V	13.3V/0V	0V/6.5V	ON/OFF
Q807	13.1V	0V	13.3V	
Q808	0V	0V/0.7V	5V/0V	ON/OFF
Q809	13.7V	0V	13.6V	
Q810	0V	13.7V	0V	
Q811	0V	9.4V/0V	0V/5.1V	ON/OFF
Q812	0V	0V/13.7V	9.4V/0V	ON/OFF
Q814	9.5V	13.6V	10.1V	
Q819	13.6V	11V/13.4V	13.6V/12.8V	ON/OFF
Q820	0V	13.6V/0V	0V/9.5V	ON/OFF
		0V/9.6V	9.6V/0V	
Q825	13.7V	13.6V/0V	13V/13.7V	

	E	C	B	MODE
Q301	0V	7.7V/0V	0V/5V	ON/OFF
		0V/8.3V	7.7V/0V	
Q307	0V	0V	0.7V/0V	ON/OFF
Q308	0V	0V	0.7V/0V	ON/OFF
Q309	0V	0V	0.7V/0V	ON/OFF
Q310	0V	0V	0.7V/0V	ON/OFF

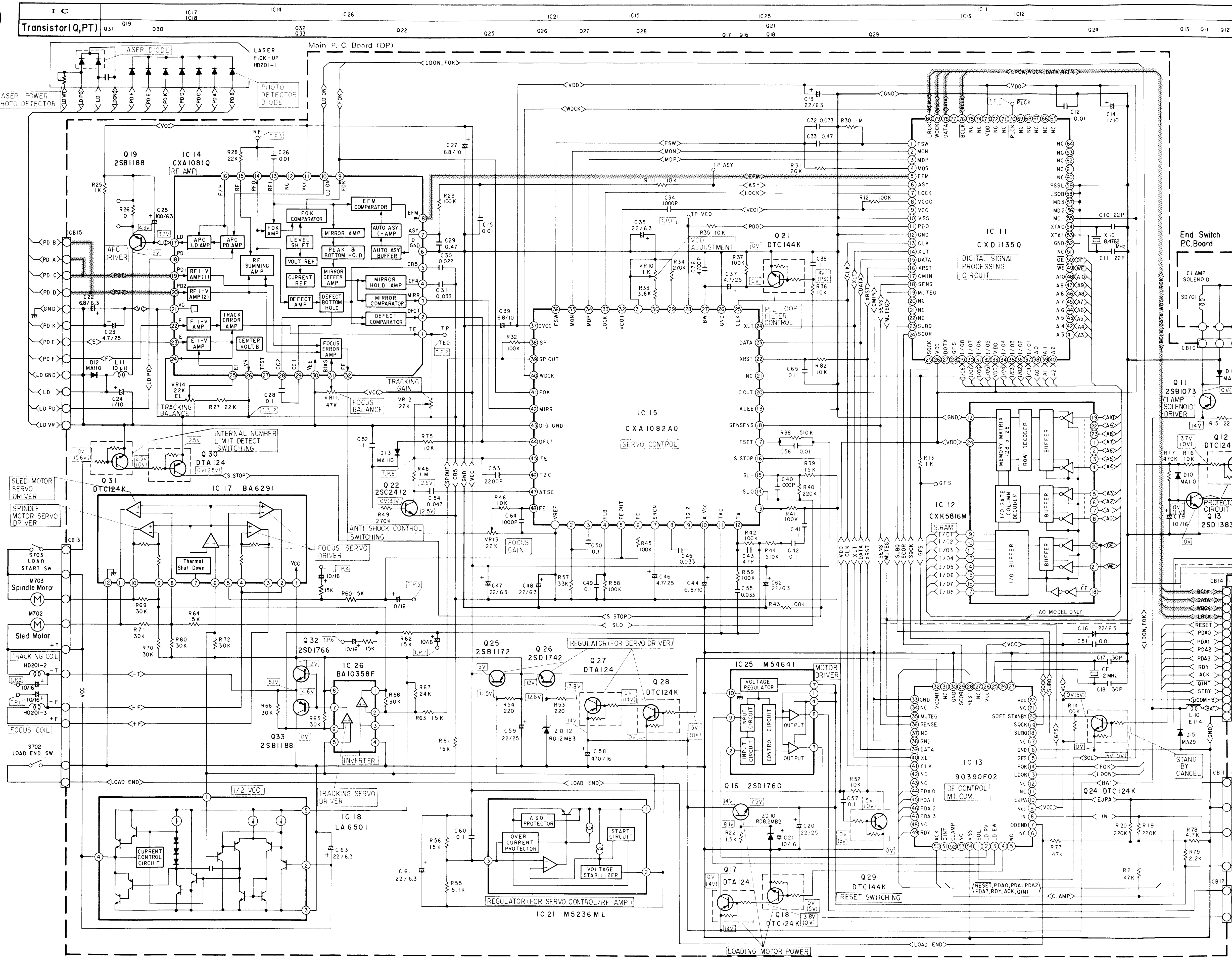
[Measuring Conditions]
- Power Supply : 14V DC
- Measuring Meter : Digital Multi Voltmeter
- Measuring Point : Between Ground
- Condition : CD YEDS 18(Play)
  FM 98.1MHz
  AM 1000KHz

NOTES:

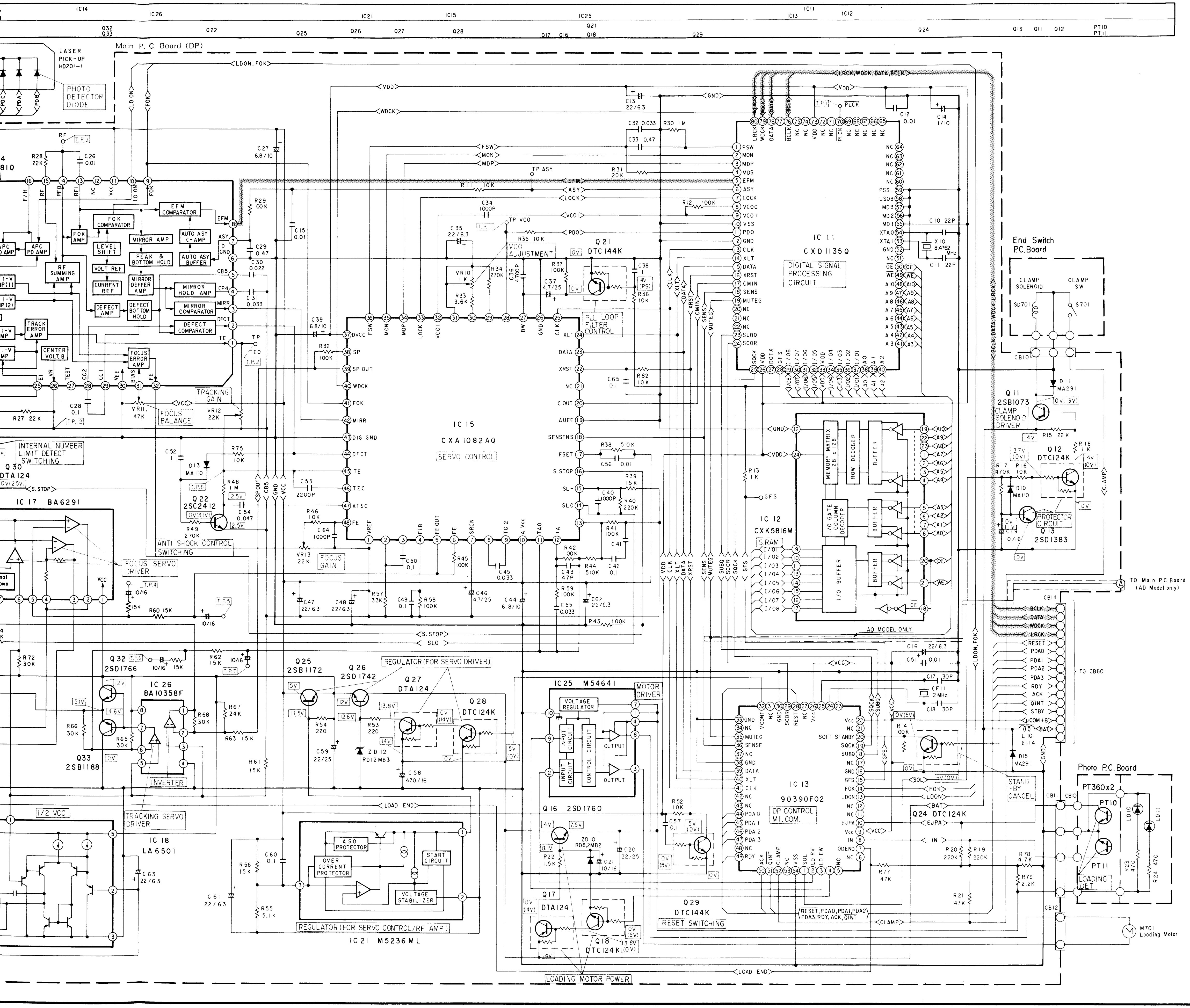
1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1.000.000}$

5905

Schematic Diagram (2/2)


IC
Transistor(Q,PT)
IC17 IC18 IC14 IC26 IC21 IC15 IC25 IC11 IC13 IC12
Q31 Q19 Q30 Q32 Q33 Q22 Q25 Q26 Q27 Q28 Q17 Q16 Q21 Q18 Q29 Q24 Q13 Q11 Q12
Main P. C. Board (DP)
LASER DIODE
LASER PICK-UP HD201-1
PHOTO DETECTOR DIODE
LASER POWER PHOTO DETECTOR
Q19 2SB1188
IC 14 CXA1081Q
RF AMP
APC DRIVER
APC LD AMP
APC PD AMP
FOK AMP
FOK COMPARATOR
EFM COMPARATOR
LEVEL SHIFT
MIRROR AMP
AUTO ASY C-AMP
VOLT REF
PEAK & BOTTOM HOLD
AUTO ASY BUFFER
RF SUMMING AMP
CURRENT REF
MIRROR DEFFER AMP
MIRROR HOLD AMP
DEFECT AMP
DEFECT BOTTOM HOLD
MIRROR COMPARATOR
DEFECT COMPARATOR
RF I-V AMP(1)
RF I-V AMP(2)
F I-V AMP
TRACK ERROR AMP
E I-V AMP
CENTER VOLT.B
FOCUS ERROR AMP
TRACKING BALANCE
FOCUS BALANCE
TRACKING GAIN
INTERNAL NUMBER LIMIT DETECT SWITCHING
Q30 DTA124
Q31 DTC124K
IC 17 BA6291
SLED MOTOR SERVO DRIVER
SPINDLE MOTOR SERVO DRIVER
Thermal Shut Down
FOCUS SERVO DRIVER
S703 LOAD START SW
M703 Spindle Motor
M702 Sled Motor
TRACKING COIL HD201-2
HD201-3
FOCUS COIL
S702 LOAD END SW
Q 22 2SC2412
ANTI SHOCK CONTROL SWITCHING
IC 15 CXA1082AQ
SERVO CONTROL
FOCUS GAIN
Q21 DTC144K
VCO ADJUSTMENT
PLL LOOP FILTER CONTROL
IC 11 CXD1135Q
DIGITAL SIGNAL PROCESSING CIRCUIT
IC 12 CXK5816M
S.RAM
MEMORY MATRIX 128×128
ROW DECODER
BUFFER
I/O GATE COLUMN DECODER
I/O BUFFER
A0 MODEL ONLY
End Switch P.C.Board
CLAMP SOLENOID
SD701
Q11 2SB1073
CLAMP SOLENOID DRIVER
Q12 DTC124
PROTECTOR CIRCUIT
Q13 2SD1383
Q 32 2SD1766
IC 26 BA10358F
Q33 2SB1188
INVERTER
Q25 2SB1172
Q 26 2SD1742
REGULATOR(FOR SERVO DRIVER)
Q27 DTA124
Q28 DTC124K
IC25 M54641
MOTOR DRIVER
VOLTAGE REGULATOR
INPUT CIRCUIT
CONTROL CIRCUIT
OUTPUT
IC 13 90390F02
DP CONTROL M1.COM.
Q24 DTC124K
STAND BY CANCEL
1/2 VCC
CURRENT CONTROL CIRCUIT
TRACKING SERVO DRIVER
IC 18 LA6501
ASO PROTECTOR
OVER CURRENT PROTECTOR
START CIRCUIT
VOLTAGE STABILIZER
REGULATOR(FOR SERVO CONTROL/RF AMP)
IC21 M5236ML
Q16 2SD1760
ZD10 RD8.2MB2
Q17 DTA124
Q18 DTC124K
Q29 DTC144K
RESET SWITCHING
LOADING MOTOR POWER
LOAD END
LRCK,WDCK,DATA,BCLK
RESET,PDA0,PDA1,PDA2, PDA3,RDY,ACK,QINT
CB15 CB13 CB10 CB14 CB11 CB12

5905


IC14
IC26
IC21
IC15
IC25
IC11
IC13
IC12
Q32
Q33
Q22
Q25
Q26
Q27
Q28
Q17
Q16
Q21
Q18
Q29
Q24
Q13
Q11
Q12
PT10
PT11
Main P.C. Board (DP)
LASER PICK-UP HD201-1
PHOTO DETECTOR DIODE
EFM COMPARATOR
FOK COMPARATOR
FOK AMP
APC PD AMP
MIRROR AMP
AUTO ASY C-AMP
LEVEL SHIFT
PEAK & BOTTOM HOLD
AUTO ASY BUFFER
VOLT REF
RF SUMMING AMP
CURRENT REF
MIRROR DEFFER AMP
MIRROR HOLD AMP
DEFECT AMP
DEFECT BOTTOM HOLD
MIRROR COMPARATOR
DEFECT COMPARATOR
TRACK ERROR AMP
CENTER VOLT. B
FOCUS ERROR AMP
TRACKING GAIN
FOCUS BALANCE
IC 15
CXA1082AQ
SERVO CONTROL
VCO ADJUSTMENT
PLL LOOP FILTER CONTROL
Q21 DTC144K
FOCUS GAIN
INTERNAL NUMBER LIMIT DETECT SWITCHING
Q30 DTA124
IC 17 BA6291
Q22 2SC2412
ANTI SHOCK CONTROL SWITCHING
FOCUS SERVO DRIVER
IC 11
CXD1135Q
DIGITAL SIGNAL PROCESSING CIRCUIT
IC 12
CXK5816M
S RAM
MEMORY MATRIX 128 x 128
ROW DECODER
BUFFER
I/O GATE COLUMN DECODER
I/O BUFFER
AD MODEL ONLY
End Switch P.C. Board
CLAMP SOLENOID
CLAMP SW
SD701
S701
Q11 2SB1073
CLAMP SOLENOID DRIVER
Q12 DTC124K
PROTECTOR CIRCUIT
Q13 2SD1383
TO Main P.C.Board (AD Model only)
TO CB601
Q32 2SD1766
Q33 2SB1188
IC 26 BA10358F
INVERTER
TRACKING SERVO DRIVER
IC 18 LA6501
1/2 VCC
Q25 2SB1172
Q26 2SD1742
Q27 DTA124
Q28 DTC124K
REGULATOR (FOR SERVO DRIVER)
IC25 M54641
MOTOR DRIVER
VOLTAGE REGULATOR
INPUT CIRCUIT
CONTROL CIRCUIT
OUTPUT
ASO PROTECTOR
OVER CURRENT PROTECTOR
START CIRCUIT
VOLTAGE STABILIZER
REGULATOR (FOR SERVO CONTROL/RF AMP)
IC21 M5236ML
Q16 2SD1760
Q17 DTA124
Q18 DTC124K
LOADING MOTOR POWER
IC 13
90390F02
DP CONTROL MI.COM.
Q29 DTC144K
RESET SWITCHING
Q24 DTC124K
STAND-BY CANCEL
Photo P.C. Board
PT360x2
PT10
PT11
LOADING DET
M701 Loading Motor
CB14
CB10
CB11
CB12

IC11

1	0V	17	PS	33	5V	49	PS	65	0V
2	4.9V	18	0V	34	PS	50	PS	66	0V
3	PS	19	5V	35	PS	51	PS	67	0V
4	PS	20	PS	36	PS	52	0V	68	0V
5	PS	21	PS	37	PS	53	PS	69	PS
6	PS	22	PS	38	PS	54	PS	70	PS
7	5V	23	PS	39	PS	55	5V	71	PS
8	PS	24	PS	40	PS	56	0V	72	0V
9	PS	25	PS	41	PS	57	0V	73	5V
10	0V	26	5V	42	PS	58	0V	74	0V
11	PS	27	PS	43	PS	59	0V	75	PS
12	0V	28	5V	44	PS	60	PS	76	PS
13	5V	29	PS	45	PS	61	PS	77	PS
14	5V	30	PS	46	PS	62	PS	78	PS
15	5V	31	PS	47	PS	63	0V	79	PS
16	5V	32	4.9V	48	PS	64	0V	80	PS

IC12

1	PS	13	PS
2	PS	14	PS
3	PS	15	PS
4	PS	16	PS
5	PS	17	PS
6	PS	18	PS
7	PS	19	PS
8	PS	20	PS
9	PS	21	PS
10	PS	22	PS
11	PS	23	PS
12	0V	24	5V

IC13

1	4.8V	19	PS	37	0V
2	0V	20	0V	38	0V
3	5V	21	0V	39	5V
4	0V	22	5V	40	5V
5	0V	23	0V	41	5V
6	0V	24	PS	42	0V
7	0V	25	PS	43	0V
8	0V	26	5V	44	PS
9	5V	27	5V	45	PS
10	0V	28	5V	46	PS
11	0V	29	PS	47	PS
12	0V	30	0V	48	0V
13	0V	31	0V	49	5V
14	5V	32	5V	50	5V
15	5V	33	0V	51	PS
16	0V	34	0V	52	0V
17	0V	35	0V	53	0V
18	PS	36	5V	54	0V

IC14

1	2.5V	17	3.7V
2	PS	18	0.2V
3	PS	19	2.5V
4	1.3V	20	2.5V
5	1V	21	2.5V
6	0V	22	2.5V
7	2.5V	23	2.5V
8	0V	24	1.9V
9	5V	25	2.1V
10	0V	26	2.5V
11	5V	27	2.4V
12	1.8V	28	1V
13	0V	29	1.4V
14	3.2V	30	0V
15	2.5V	31	2.6V
16	3.6V	32	2.5V

IC15

1	2.5V	17	0.8V	33	5V
2	2.5V	18	5V	34	PS
3	2.4V	19	0V	35	5V
4	2.5V	20	0V	36	2.5V
5	2.5V	21	5V	37	5V
6	3V	22	5V	38	2.5V
7	2.6V	23	5V	39	1.9V
8	2.5V	24	5V	40	PS
9	2.5V	25	5V	41	5V
10	5V	26	0V	42	PS
11	2.5V	27	2.5V	43	0V
12	2.5V	28	2.5V	44	PS
13	2.5V	29	2.3V	45	2.5V
14	2.7V	30	2.4V	46	2.5V
15	2.5V	31	3.6V	47	2.5V
16	0V	32	PS	48	2.5V

IC17

1	12V
2	5.8V
3	5.5V
4	5.8V
5	5.6V
6	5.6V
7	0.3V
8	5.6V
9	4.5V
10	6.8V
11	5.3V
12	0V

IC25

1	6.1V
2	0V
3	0V
4	6.1V
5	–
6	–
7	6.1V
8	0V
9	0V
10	0V

IC26

1	4.3V
2	5.6V
3	5.6V
4	0V
5	5.6V
6	5.6V
7	4.6V
8	12V

NOTES:

1. All resistance values are in ohms. K = 1,000
2. All capacitance values are in microfarads. $P = \frac{1}{1,000,000}$

Electrical Parts List

Resistor : Carbon resistors under 1/4 watts are not mentioned in the parts list, please confirm them by schematic diagram.
uF = microfarads, pF = picofarads

Abbreviations

RES. = Resistor
C.F. = Carbon Film
M.F. = Metal Film
M.O. = Metal Oxide Film
M.P. = Metal Plate
TR. = Transistor
TRANS. = Transformer
CP. = Chip

CAP. = Capacitor
ELY. = Electrolytic
CER. = Ceramic
MYL. = Mylar
TAN. = Tantalum
POLY. = Polystyrol
PP. = Polypropylene
PLT. = Polyethylene

Symbol No.	Part No.	Description		
Main P. C. Board (DP)				
IC's				
IC11	51T84719F02	CXD1135OQ		
IC12	51T90640F01	CXK5816M		
or	51T84723F02	LC3516AML		
IC13	51T90390F02	90390F02		
or	51T92369F04	92369F04		
IC14	51T92280F01	CXA1081Q		
IC15	51T84119F01	CXA1082AQ		
IC17	51T92303F01	BA6291		
IC18	51T90889F01	LA6501		
IC21	51T90890F01	CP., M5236ML		
IC25	51T92373F02	M54641		
IC26	51T92693F01	BA10358F		
or	51T93333F01	NJM2904M		
Transistors				
Q11	48T93351F01	CP., 2SB1073		
Q12	48T62967F03	CP., DTC124K		
Q13	48T81552F01	CP., 2SD1383K		
Q16	48T92368F01	2SD1760		
Q17	48T62966F03	CP., DTA124		
Q18	48T62967F03	CP., DTC124K		
Q19	48T80612F01	CP., 2SB1188		
Q21	48T62967F04	CP., DTC144K		
Q22	48T63417F01	CP., 2SC2412K		
Q24	48T62967F03	CP., DTC124K		
Q25	48T82870F01	2SB1172A		
Q26	48T74164F01	2SD1742		
Q27	48T62966F03	CP., DTA124		
Q28	48T62967F03	CP., DTC124K		
Q29	48T62967F04	CP., DTC144K		
Q30	48T62966F03	CP., DTA124		
Q31	48T62967F03	CP., DTC124K		
Q32	48T80615F01	CP., 2SD1766		
Q33	48T80612F01	CP., 2SB1188		
Diodes				
D10	48T90681F01	CP., MA110		
D11	48T74692F02	CP., MA291		
D12	48T90681F01	CP., MA110		
D13	48T90681F01	CP., MA110		
D15	48T74692F02	CP., MA291		
ZD10	48T62934F34	CP., Zener, RD8.2MB2		
ZD12	48T62934F47	CP., Zener, RD12MB3		
Coils/Crystal/Filter				
L10	25T47510F04	Choke Filter		
L11	24T51656F22	Inductor, 10 μ H		
X10	48T72757F01	Crystal, 8.4672MHz		
CF11	91T72630F01	CER., Filter, CSA2.00MG		
Capacitors				
C10	08S65128F19	CP., 22pF		
C11	08S65128F19	CP., 22pF		
C12	08S65128F69	CP., 0.01 μ F		
C13	23T74180F01	CP., ELY., 22 μ F/6.3V		
C14	23T74181F11	CP., T.T 1 μ F/10V		
C15	08S65128F69	CP., 0.01 μ F		
C16	23T74180F01	CP., ELY., 22 μ F/6.3V		
C17	08S65128F22	CP., 30pF		
C18	08S65128F22	CP., 30pF		
C19	23T74180F03	CP., ELY., 10 μ F/16V		
C20	23T74180F06	CP., ELY., 22 μ F/25V		
C21	23T74180F03	CP., ELY., 10 μ F/16V		
C22	23T74181F32	CP., T.T 6.8 μ F/6.3V		
C23	23T74180F05	CP., ELY., 4.7 μ F/25V		
C24	23T74181F11	CP., T.T 1 μ F/10V		
C25	23T74180F02	CP., ELY., 100 μ F/6.3V		
C26	08S65128F69	CP., 0.01 μ F		
C27	23T74181F33	CP., T.T 6.8 μ F/10V		
C28	08S53332F57	CP., 0.1 μ F		
C29	08T81833F04	CP., 0.47 μ F		

Symbol No.	Part No.	Description		
C30	08S65128F72	CP., 0.022 µ F		
C31	08S65128F73	CP., 0.033 µ F		
C32	08S65128F73	CP., 0.033 µ F		
C33	08T81833F04	CP., 0.47 µ F		
C34	08S65128F57	CP., 1000pF		
C35	23T74180F01	CP., ELY., 22 µ F/6.3V		
C36	08S65128F65	CP., 4700pF		
C37	23T74180F05	CP., ELY., 4.7 µ F/25V		
C38	08T81833F03	CP., 1 µ F		
C39	23T74181F33	CP., T.T 6.8 µ F/10V		
C40	08S65128F57	CP., 1000pF		
C41	08T81833F03	CP., 1 µ F		
C42	08S65128F76	CP., 0.1 µ F		
C43	08S65128F27	CP., 47pF		
C44	23T74181F33	CP., T.T 6.8 µ F/10V		
C45	08S53332F53	CP., 0.033 µ F		
C46	23T74180F05	CP., ELY., 4.7 µ F/25V		
C47	23T74180F01	CP., ELY., 22 µ F/6.3V		
C48	23T74180F01	CP., ELY., 22 µ F/6.3V		
C49	08S65128F76	CP., 0.1 µ F		
C50	08S65128F76	CP., 0.1 µ F		
C51	08S65128F69	CP., 0.01 µ F		
C52	08T81833F03	CP., 1 µ F		
C53	08S65128F61	CP., 2200pF		
C54	08S65128F74	CP., 0.047 µ F		
C55	08S65128F73	CP., 0.033 µ F		
C56	08S65128F69	CP., 0.01 µ F		
C57	08S53332F57	CP., 0.1 µ F		
C58	23C42170G30	CP., ELY., 470 µ F/16V		
C59	23T74180F06	CP., ELY., 22 µ F/25V		
C60	08S53332F57	CP., 0.1 µ F		
C61	23T74180F01	CP., ELY., 22 µ F/6.3V		
C62	23T74180F01	CP., ELY., 22 µ F/6.3V		
C63	23T74180F01	CP., ELY., 22 µ F/6.3V		
C64	08S65128F57	CP., 1000pF		
C65	08S53332F57	CP., 0.1 µ F		
Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)				
R11	06S64995F77	10k ohm		
R12	06S64996F02	100k ohm		
R13	06S64995F53	1k ohm		
R14	06S64996F02	100k ohm		
R15	06S64995F85	22k ohm		

Symbol No.	Part No.	Description		
R16	06S64995F77	10k ohm		
R17	06S64996F18	470k ohm		
R18	06T70072F53	1k ohm 1/4W		
R19	06S64996F10	220k ohm		
R20	06S64996F10	220k ohm		
R21	06S64995F93	47k ohm		
R22	06S64995F57	1.5k ohm		
R25	06S64995F53	1k ohm		
R26	06S64995F05	10 ohm		
R27	06S61995F85	22k ohm		
R28	06S64995F85	22k ohm		
R29	06S64996F02	100k ohm		
R30	06S64996F26	1M ohm		
R31	06S64995F84	20k ohm		
R32	06S64996F02	100k ohm		
R33	06S64995F66	3.6k ohm		
R34	06S64996F12	270k ohm		
R35	06S64995F77	10k ohm		
R36	06S64995F77	10k ohm		
R37	06S64996F02	100k ohm		
R38	06S64996F19	510k ohm		
R39	06S64995F81	15k ohm		
R40	06S64996F10	220k ohm		
R41	06S64996F02	100k ohm		
R42	06S64996F02	100k ohm		
R43	06S64996F02	100k ohm		
R44	06S64996F19	510k ohm		
R45	06S64996F02	100k ohm		
R46	06S64995F77	10k ohm		
R48	06S64996F26	1M ohm		
R49	06S64996F12	270k ohm		
R52	06S64995F77	10k ohm		
R53	06T70072F37	220 ohm 1/4W		
R54	06T70072F37	220 ohm 1/4W		
R55	06S64995F70	5.1k ohm		
R56	06S64995F81	15k ohm		
R57	06S64995F89	33k ohm		
R58	06S64996F02	100k ohm		
R59	06S64996F02	100k ohm		
R60	06S64995F81	15k ohm		
R61	06S64995F81	15k ohm		
R62	06S64995F81	15k ohm		
R63	06S64995F81	15k ohm		
R64	06S64995F81	15k ohm		
R65	06S64995F88	30k ohm		
R66	06S64995F88	30k ohm		
R67	06S64995F86	24k ohm		
R68	06S64995F88	30k ohm		
R69	06S64995F88	30k ohm		
R70	06S64995F88	30k ohm		

Symbol No.	Part No.	Description		
R71	06S64995F88	30k ohm		
R72	06S64995F88	30k ohm		
R75	06S64995F77	10k ohm		
R77	06S64995F93	47k ohm		
R78	06S64995F69	4.7k ohm		
R79	06S64995F61	2.2k ohm		
R80	06S64995F88	30k ohm		
R82	06S64995F77	10k ohm		
VR10	18T93996F07	Variable, 1k ohm		
VR11	18T93996F17	Variable, 47k ohm		
VR12	18T93996F15	Variable 22k ohm		
VR13	18T93996F15	Variable, 22k ohm		
VR14	18T93996F15	Variable, 22k ohm		

Photo P. C. Board

Transistors/LEDs/Resistors

Symbol No.	Part No.	Description		
PT10	48T92913F01	Photo, PT360		
PT11	48T92913F01	Photo, PT360		
LD10	48T92912F01	LED, SLN−210RC (RED)		
LD11	48T92912F01	LED, SLN−210RC (RED)		
R23	06S53330F45	CP., 470 ohm 1/8W		
R24	06S53330F45	CP., 470 ohm 1/8W		

Main P. C. Board

IC's

	Symbol No.	Part No.	Description		
	IC201	51T92299F01	μ PD6355G		
	IC202	51T73718F02	NJM4560D		
	IC203	51T68387F01	TC4052BP		
	IC204	51T73718F02	NJM4560D		
	IC205	51T93222F01	M5236L		
	IC206	51T73718F02	NJM4560D		
●	IC601	51T94530F02	94530F02		
▲	IC601	51T94530F04	94530F04		
	IC602	51T60226F01	TC4051BP		
	IC603	51T47739F01	TC4066BP		
	IC604	51T92166F01	S−8052ALR		
	IC605	51T72309F01	MN1280		
	IC801	51T74156F01	M51953BL		

Transistors

Symbol No.	Part No.	Description		
Q201	48T94606F05	CP., DTC114TU		
Q202	48T94606F05	CP., DTC114TU		
Q203	48T94606F03	CP., DTC124EU		
Q205	48T70213F01	2SB911M		
Q206	48S40627U04	2SD636		

Symbol No.	Part No.	Description		
Q601	48T94581F01	CP., 2SA1576		
Q602	48T94606F05	CP., DTC114TU		
Q603	48T73888F08	CP., FMG1		
Q803	48S42455F01	2SD638		
Q804	48S42455F01	2SD638		
Q805	48T94606F53	CP., DTA124EU		
Q806	48T94606F03	CP., DTC124EU		
Q807	48T94606F56	CP., DTA114EU		
Q808	48T94606F03	CP., DTC124EU		
Q809	48T94581F01	CP., 2SA1576		
Q810	48T94606F03	CP., DTC124EU		
Q811	48T94606F03	CP., DTC124EU		
Q812	48T94606F03	CP., DTC124EU		
Q814	48T80055F01	2SD1189		
Q819	48T47866F02	2SB644		
Q820	48T73888F08	CP., FMG1		
Q825	48T70213F01	2SB911M		

Diodes

	Symbol No.	Part No.	Description		
	D608	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D609	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D610	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D611	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D612	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D613	48T90681F01	CP., MA110		
	D614	48T90681F01	CP., MA110		
	D615	48T90681F01	CP., MA110		
	D616	48T90681F01	CP., MA110		
●	D617	48T44813F02	MA165		
	D801	48C40235G02	10E2		
	D802	48C40235G02	10E2		
	D804	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D805	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D806	48T44813F01	MA165TA		
	or	48T68828F01	1SS133		
	D807	48T94608F03	CP., DAN202U		
	D808	48T94608F01	CP., DA204U		
	D809	48C40235G02	10E2		
	D810	48C40235G02	10E2		
	D811	48C40235G02	10E2		
	D812	48C40235G02	10E2		
	D814	48C40235G02	10E2		
	ZD201	48T83128F12	Zener, HZS7A3L		

Notes : ● : For North American model only (AO), ▲ : For European model only (EO), Others : Common.

Symbol No.	Part No.	Description		
ZD601	48T68697F20	Zener, HZS5.6EB1		
ZD602	48T68697F20	Zener, HZS5.6EB1		
● ZD604	48T68698F17	Zener, HZS5.1EB1		
ZD801	48T83128F09	Zener, HZS6C3L		
ZD802	48T91071F12	Zener, HZS5CLL		
ZD803	48T83128F03	Zener, HZS6A3L		
ZD804	48T68697F01	Zener, HZS2.7EB1		
ZD805	48T83128F25	Zener, HZS9C1L		

Switches/Crystal

Symbol No.	Part No.	Description		
S201	40T64365F01	Switch, Slide (TUNER/LINE)		
S601	40T72772F01	Switch, TR-80B10FA		
X601	91T92651F01	Crystal, 4.19MHz		

Capacitors

Symbol No.	Part No.	Description		
C201	23T74437F32	TAN., 10 μF/16V		
C202	23S57422F11	ELY., 22 μF/16V		
C203	23S61523F09	ELY., 22 μF/10V		
C204	23T74437F32	TAN., 10 μF/16V		
C205	08T72783F19	CP., 47pF		
C206	08T72783F19	CP., 47pF		
C207	23T82372F08	ELY., 10 μF/16V (B.P.)		
C208	23T82372F08	ELY., 10 μF/16V (B.P.)		
C209	08T72783F38	CP., 1800pF		
C210	08T72783F38	CP., 1800pF		
C211	08T72783F23	CP., 100pF		
C212	08T72783F23	CP., 100pF		
C213	23S57422F09	ELY., 10 μF/16V		
C215	08T90316F17	T.F., 0.01 μF		
C216	08T50579F01	T.F., 0.01 μF		
C217	08T72783F28	CP., 270pF		
C218	08T72783F28	CP., 270pF		
C221	23S61523F28	ELY., 0.47 μF/50V		
C222	23S61523F34	ELY., 100 μF/10V		
C223	23S61523F12	ELY., 10 μF/16V		
C224	23T74437F32	TAN., 10 μF/16V		
C225	23S57422F09	ELY., 10 μF/16V		
C234	23T43247F05	ELY., 1 μF/50V		
C235	08S65128F69	CP., 0.01 μF		
C236	23S61523F34	ELY., 100 μF/10V		
C237	21C45322G14	CER., 22pF		
C238	21C45322G14	CER., 22pF		
C601	08S65128F22	CP., 30pF		
C602	08S65128F22	CP., 30pF		
C603	23S61523F34	ELY., 100 μF/10V		
C605	23S61523F12	ELY., 10 μF/16V		
C607	08S65128F69	CP., 0.01 μF		
● C608	23S57422F09	ELY., 10 μF/16V		
● C610	23S57422F11	ELY., 22 μF/16V		
C801	23T51232F02	ELY., 1000 μF/16V		
C803	23S61523F29	ELY., 1 μF/50V		
C805	23S61523F25	ELY., 0.1 μF/50V		
C806	23T82372F10	ELY., 3.3 μF/25V		
C807	23S61523F12	ELY., 10 μF/16V		
C808	23S61523F12	ELY., 10 μF/16V		
C811	23S92017F03	ELY., 100 μF/16V		
C812	23S92017F03	ELY., 100 μF/16V		

Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)

Symbol No.	Part No.	Description		
R201	06S53330F69	4.7k ohm 1/8W		
R203	06S64995F81	15k ohm		
R204	06S64995F81	15k ohm		
R205	06S64995F81	15k ohm		
R206	06S64995F81	15k ohm		
R207	06S64995F81	15k ohm		
R208	06S64995F81	15k ohm		
R209	06S64995F66	3.6k ohm		
R210	06S64995F66	3.6k ohm		
R211	06S64995F57	1.5k ohm		
R212	06S64995F57	1.5k ohm		
R213	06S64996F18	470k ohm		
R214	06S64996F18	470k ohm		
R215	06S64995F87	27k ohm		
R216	06S64995F87	27k ohm		
R217	06S64995F85	22k ohm		
R220	06S53331F02	100k ohm 1/8W		
R221	06S64995F81	15k ohm		
R222	06S64995F81	15k ohm		
R223	06S64996F02	100k ohm		
R224	06S64996F02	100k ohm		
R225	06S64995F89	33k ohm		
R226	06S64995F89	33k ohm		
R229	06S64995F37	220 ohm		
R230	06S64995F81	15k ohm		
R231	06S64995F87	27k ohm		
R232	06S64995F69	4.7k ohm		
R233	06S64995F76	9.1k ohm		
R234	06S64995F77	10k ohm		
R235	06S64995F41	330 ohm		
R248	06S64995F65	3.3k ohm		
R601	06S64995F61	2.2k ohm		
R602	06S64995F85	22k ohm		
R603	06S64995F85	22k ohm		
R604	06S64995F85	22k ohm		

Notes : ● : For North American model only (AO), ▲ : For European model only (EO), Others : Common.

Symbol No.	Part No.	Description		
R608	06S64995F69	4.7k ohm		
R609	06S64996F02	100k ohm		
R613	06S64995F85	22k ohm		
R614	06S64995F85	22k ohm		
R615	06S53331F02	100k ohm 1/8W		
R616	06S53331F02	100k ohm 1/8W		
R617	06S64996F02	100k ohm		
R618	06S64996F26	1M ohm		
● R805	06S64995F77	10k ohm		
▲ R805	06S64995F65	3.3k ohm		
R806	06S64995F69	4.7k ohm		
R807	06S64996F02	100k ohm		
R809	06S64995F77	10k ohm		
R810	06S64995F85	22k ohm		
R811	06S64995F53	1k ohm		
R812	06S64995F85	22k ohm		
R813	06S64995F61	2.2k ohm		
R814	06S64995F77	10k ohm		
R815	06T70072F80	2.7 ohm 1/4W		
R816	06T70072F80	2.7 ohm 1/4W		
R817	06S64995F77	10k ohm		
R818	06S64995F77	10k ohm		
R819	06S64995F61	2.2k ohm		
R822	06T70072F45	470 ohm 1/4W		
R823	06T70072F21	47 ohm 1/4W		
R824	06T70072F21	47 ohm 1/4W		
R830	06T70072F21	47 ohm 1/4W		
R831	06T70072F21	47 ohm 1/4W		
R832	06S64995F77	10k ohm		
R833	06S64995F77	10k ohm		
R834	06S64995F61	2.2k ohm		
R835	06T70072F53	1k ohm 1/4W		
R844	06T70072F21	47 ohm 1/4W		
R845	06T70072F21	47 ohm 1/4W		
R846	06S53330F77	10k ohm 1/8W		
R6001	06T74182F07	Block, 47k ohm × 9		
R6002	06T74182F03	Block, 100k ohm × 4		

Audio P. C. Board

IC's

Symbol No.	Part No.	Description		
IC301	51T73718F02	NJM4560D		
IC302	51T47739F01	TC4066BP		
IC303	51T73718F02	NJM4560D		
IC304	51T73718F02	NJM4560D		

Transistors/Switch

Symbol No.	Part No.	Description		
Q301	48T73888F08	CP., FMG1		
Q307	48T57337F03	2SD1330		
Q308	48T57337F03	2SD1330		
Q309	48T57337F03	2SD1330		
Q310	48T57337F03	2SD1330		
S301	40T68063F01	Switch, SSJ-322A (TONE/BYPASS)		

Capacitors

Symbol No.	Part No.	Description		
C301	08T42629F28	MYL., 0.082 μF		
C302	08T42629F28	MYL., 0.082 μF		
C303	08T42629F31	MYL., 0.15 μF		
C304	08T42629F31	MYL., 0.15 μF		
C305	08T44481F01	PP., 330pF		
C306	08T44481F01	PP., 330pF		
C307	08T44481F03	PP., 390pF		
C308	08T44481F03	PP., 390pF		
C309	23S61524F13	ELY., 10 μF/16V		
C310	23S61524F13	ELY., 10 μF/16V		
C311	23S61523F12	ELY., 10 μF/16V		
C312	23S61523F12	ELY., 10 μF/16V		
C313	23S61524F13	ELY., 10 μF/16V		
C315	23S61524F13	ELY., 10 μF/16V		
C316	23S61524F13	ELY., 10 μF/16V		
C317	23S61524F13	ELY., 10 μF/16V		
C319	23S61524F13	ELY., 10 μF/16V		
C320	23S61524F13	ELY., 10 μF/16V		
C321	23S61524F18	ELY., 4.7 μF/25V		
C322	23S61524F18	ELY., 4.7 μF/25V		
C323	08S65128F17	CP., 18pF		
C324	08S65128F17	CP., 18pF		
C325	23T43247F09	ELY., 10 μF/16V		
C326	23S61524F13	ELY., 10 μF/16V		
C327	08S65128F69	CP., 0.01 μF		
C328	23S57422F09	ELY., 10 μF/16V		
C329	21C45322G10	CER., 10pF		
C330	21C45322G10	CER., 10pF		

Resistors (All resistors are chip 1/16W±5% unless otherwise noted.)

Symbol No.	Part No.	Description		
R301	06S64995F71	5.6k ohm		
R302	06S64995F71	5.6k ohm		
R303	06S64995F71	5.6k ohm		
R304	06S64995F71	5.6k ohm		
R305	06S64995F91	39k ohm		

Notes : ● : For North American model only (AO), ▲ : For European model only (EO), Others : Common.

Symbol No.	Part No.	Description		
R306	06S64995F91	39k ohm		
R307	06S64995F71	5.6k ohm		
R308	06S64995F71	5.6k ohm		
R309	06S64995F71	5.6k ohm		
R310	06S64995F71	5.6k ohm		
R311	06S64996F26	1M ohm		
R312	06S64996F26	1M ohm		
R317	06S53331F02	100k ohm 1/8W		
R318	06S53331F02	100k ohm 1/8W		
R319	06S64995F89	33k ohm		
R320	06S64995F89	33k ohm		
R321	06S64996F02	100k ohm		
R322	06S64996F02	100k ohm		
R323	06S64995F61	2.2k ohm		
R324	06S64995F85	22k ohm		
R332	06S53330F53	1k ohm 1/8W		
R333	06S64995F53	1k ohm		
R334	06S64995F53	1k ohm		
R335	06S64995F69	4.7k ohm		
R336	06S64995F69	4.7k ohm		
R337	06S64995F69	4.7k ohm		
R338	06S64995F69	4.7k ohm		
R339	06S53330F29	100 ohm 1/8W		
R340	06S53330F29	100 ohm 1/8W		
R341	06S53330F29	100 ohm 1/8W		
R342	06S53330F29	100 ohm 1/8W		
R343	06S64995F70	5.1k ohm		
R344	06S53330F70	5.1k ohm 1/8W		
R345	06S64995F70	5.1k ohm		
R346	06S64995F70	5.1k ohm		
R347	06S64995F70	5.1k ohm		
R348	06S64995F70	5.1k ohm		
R349	06S64995F70	5.1k ohm		
R350	06S64995F70	5.1k ohm		
VR301 VR302 VR303 VR304 VR305 VR306 S302	18T94013F02	Volume Control (BALANCE, VOLUME FADER, POWER)		

Front P. C. Board

Diode/LED's

Symbol No.	Part No.	Description		
D401	48T63462F01	CP., DAN202K		
LD401	48T72180F01	LED, (GRN/ORG)		
LD402	48T72180F01	LED, (GRN/ORG)		
LD403	48T72180F01	LED, (GRN/ORG)		
LD404	48T72180F01	LED, (GRN/ORG)		

Switches

Symbol No.	Part No.	Description		
S403	40T70366F01	Tact, KHL−10906 (EJECT)		
S404	40T70366F01	Tact, KHL−10906 (1/CLEAR)		
S405	40T70366F01	Tact, KHL−10906 (2/PRESET)		
S406	40T70366F01	Tact, KHL−10906 (3/P.S.P.)		
S408	40T70366F01	Tact, KHL−10906 (4/REPEAT)		
S409	40T70366F01	Tact, KHL−10906 (5/SCAN)		
S410	40T70366F01	Tact, KHL−10906 (6/M.I.X.)		
S411	40T70366F01	Tact, KHL−10906 (DISK/▶/❚❚)		
S412	40T70366F01	Tact, KHL−10906 (TUNE/DISP)		
S413	40T70366F01	Tact, KHL−10906 (▶▶❚ /UP)		
S414	40T70366F01	Tact, KHL−10906 (DOWN/❚◀◀)		
S416	40T70366F01	Tact, KHL−10906 (RESET)		

Lamps

Symbol No.	Part No.	Description		
PL401	65T95274F02	6V−70mA		
PL403	65T95274F02	6V−70mA		
PL405	65T80297F05	6V−65mA		
PL407	65T95083F01	6.7V−85mA		
PL409	65T95083F01	6.7V−85mA		

Resistors (All resistors are chip 1/4W±5% unless otherwise noted.)

Symbol No.	Part No.	Description		
R401	06T70072F49	680 ohm		
R403	06T70072F49	680 ohm		
R405	06T70072F49	680 ohm		
R407	06T70072F49	680 ohm		
R409	06T70072F17	33 ohm		
R411	06T70072F26	75 ohm		
R413	06T70072F26	75 ohm		
R415	06T70072F47	560 ohm		
VR401	18T93886F03	Volume, Slide, 100k ohm B × 2 (GRN) (TREBLE/BASS)		

CD Mechanism Assembly Parts List

Symbol No.	Index	Part No.	Description		
202	4-G	15C90815F01	Guide, Top		
203		03S44205G14	Screw, Pan (M2×5)		
204	4-G	47A73606F01	Shaft, Roller		
205	4-G	01A73582F01	Assy, Roller		
206		04A41345P06	Washer, Lock (M2.1)		
207	3-G	75A90825F01	Cushion, Magnet		
208	4-G	45A90817F01	Arm, Solenoid (1)		
209	5-G	45A90818F01	Arm, Solenoid (2)		
210	5-G	41A92364F01	Spring, Solenoid		
211	4-H	43A90874F01	Bush, Cam		
212	4-G	47A61544F01	F/R Plunger		
213	5-G	03S94385F14	Screw Countersink (M2.6×3)		
214	3-G	84A92276F01	End Switch P. C. Board (A)		
215		03D40014G02	Screw, W/Washer (M2×6)		
216		03D40014G07	Screw, W/Washer (M2×4)		
217	4-H	04A41345P08	Washer, Lock (M1.7)		
218		15B91024F01	Guide, Disc Side		
219	3-G	75A90826F01	Sheet, Magnet		
221	2-G	49B90822F01	Roller (G)		
222	2-G	01A92317F01	Assy, Arm Load (L) Rivet		
223		43A90873F01	Bush, Roller		
224	5-E	01B92318F01	Assy, Loading Bracket Rivet		
225	5-D	41A90877F01	Spring, Cam		
226	5-D	03D40014G62	Screw, W/Washer (M2×3)		
227	6-D	44A90836F01	Gear (D)		
228	6-D	44A90837F01	Gear (E)		
229		04A41345P01	Washer, Lock (M1.2)		
230		75B90831F01	Damper, DP		
231		15A90832F01	Holder, Damper		
232	4-E	04C42091G06	Ring “E” (M1.5)		
233		04C42091G11	Ring “E” (M2.5)		
234	4-D	29C41045P02	Lug, Wrap Alound		
235	6-D	01B92319F01	Assy, Cam Loading Rivet		
236	5-D	43A92691F01	Bush, Up−Clamp		
237		04C42091G05	Ring “E” (M2)		

Symbol No.	Index	Part No.	Description		
238		03S44205G42	Screw, Pan (M2.6×4)		
239	2-E	01A92321F01	Assy, Clamper Bracket Rivet		
240		03S94385F09	Screw, Pan (M2×3)		
242	3-F	03S94385F01	Screw, Pan (M1.7×2.3)		
243	3-F	43A93646F01	Tabel, Spindle		
244	2-C	07A90992F08	Bracket, Screw		
245	2-E	47A91004F01	Shaft, Pick-up		
246		43A90995F01	Stopper, Shaft		
247		03S94385F10	Screw, Pan (M2×4)		
248	3-E	03S94385F06	Screw, Pan (M2×1.8)		
249	3-D	01B92218F01	Assy, Disc Support Arm		
250		04S40075G06	Washer, Polyslider (M2.1)		
251	4-D	01V91700F07	Assy, Motor Unit		
252	4-D	44A90996F01	Gear, Motor		
253	4-H	41B90875F06	Spring, Pull		
254	4-D	44A90997F01	Gear, Middle		
255	4-D	04A41345P02	Washer, Lock (M1.7)		
256	3-D	03S94385F12	Screw, Pan (M2×6)		
257	2-D	01V91700F08	Assy, Shaft Screw		
258	3-G	30T73687F14	Wire, Parallel (3P)		
259	3-C	41A90999F01	Spring, Screw		
260	3-C	43A41006F05	Spacer, Polyslider		
261	2-D	41A94452F01	Spring, Motor		
262	2-D	07A90993F01	Bracket, Pick		
263	2-E	01A90994F01	Spring, Nut		
264	2-E	03S94385F03	Screw, Pan (M1.7×4)		
265	3-F	84T90887F01	FPC Photo P. C. Board		
266	3-F	07A92196F01	Bracket, Flex Wire		
267	2-F	01A92322F01	Assy, Arm Clamp Rivet		
268	3-F	41B90875F05	Spring, Pull		
269	3-G	07B90840F01	Support, Clamp		
270	3-F	59A90842F01	Magnet, Clamp		
271	3-F	46A90868F01	Stud, Clamp		
272		04S40075G42	Washer, Polyslider (M2.1)		
274	5-D	44A90830F01	Rack, Cam		

NOTE : The parts without part numbers are not supplied.

Symbol No.	Index	Part No.	Description		
275	3-F	14A94817F01	Sheet, Table		
277	4-A	03D40014G06	Screw, W/Washer (M2.6×5)		
278	2-F	41A96086F01	Spring, Arm Clamp		
282		43A53357F08	Spacer, LED		
283	2-F	30T73687F13	Wire, Parallel (2P)		
284	2-F	01V91900F66	Assy, Photo P. C. Board		
285	5-H	01A92324F01	Assy, Arm Load (R) Rivet		
287	5-G	01T91085F01	Assy, Clutch DP		
288	5-G	04A41345P13	Washer, Lock (M1.7)		
289	2-H	03A90175F01	Screw, Bind (M2×4)		
290		03A90175F02	Screw, Bind (M2×3)		
291	4-F	41B90875F07	Spring Pull		
292	5-G	44A90834F01	Gear (B)		
293	4-H	44A90835F01	Gear (C)		
294	4-G	44B90838F01	Gear, Cam		
295	1-F	41A90876F01	Spring, Roller		
296	4-D	41A90875F01	Spring, Pull		
297	1-D	41B90875F02	Spring, Pull		
298	1-E	41B90875F03	Spring, Pull		
299	4-E	41B90875F04	Spring, Pull		
300		03S68259F12	Screw, Pan (M2×2.5)		
301	3-G	07A96007F01	Bracket, Support Clamp		
302	2-D	75S96179F01	Sheet, Support Disc		
303	1-C	01V91700F05	Assy, Pickup Unit－S		

Symbol No.	Index	Part No.	Description		

NOTE : The parts without part numbers are not supplied.

Symbol No.	Part No.	Description		
Mute P. C. Board				
Diodes/Capacitor				
D816	48T44813F02	Diode, MA165		
ZD807	48T68697F01	Diode, Zener, HZS2.7EB1		
C813	23S61523F14	ELY., 33 μ F/16V		
Miscellaneous				
BA801	60T83249F01	Battery, Lit		
E802	01T94604F02	Assy., QRB Connector		
HD201	88T90878F01	Pick-up Unit		
LCD401	65T94131F01	LCD Display (LU1405)		
M701	01V91700F04	Assy., Motor Loading		
M702	59T90879F01	Motor, SLED		
M703	59T91005F01	Motor, Spindle		
S701	40T71025F03	Switch, Detector		
S702	40T71025F01	Switch, Detector (Load END)		
S703	40T71025F01	Switch, Detector (LS)		
SD701	01A90816F01	Assy., DP Frame Solenoid		

Symbol No.	Part No.	Description		

Cabinet Assembly Parts List

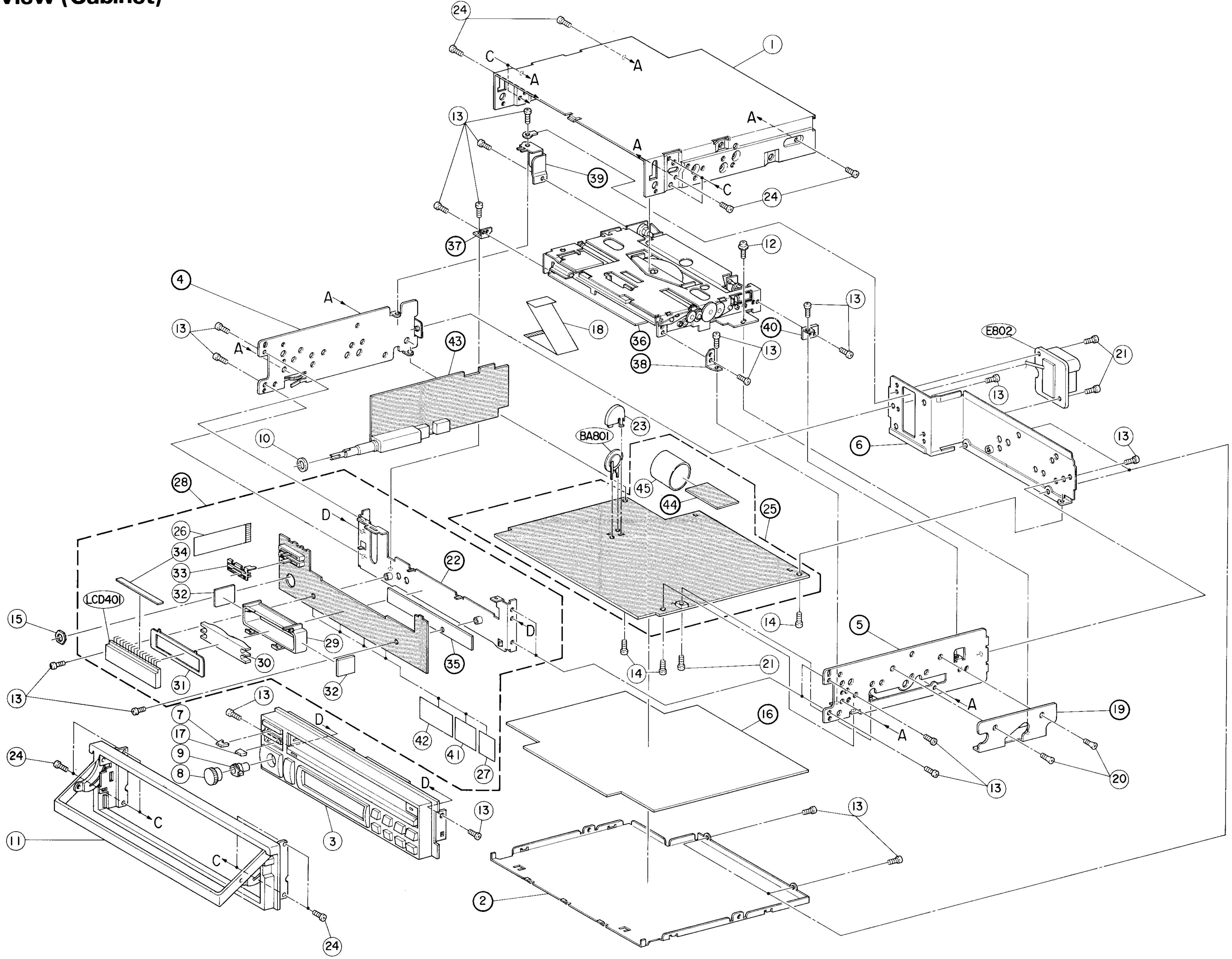
NOTE : The parts without part numbers are not supplied.

Symbol No.		Index	Part No.	Description		
	1	1-E	15C96403F03	Cover, Top		
●	3	5-C	13D94083F06	Assy., Nosepiese		
▲	3	5-C	13D94083F07	Assy., Nosepiece		
	7	5-B	36B94116F01	Knob, Slide		
	8	5-B	36A94114F01	Knob, Control (Front)		
	9	5-B	36A94115F01	Assy., Handol Bracket		
	10	3-C	04A43020G05	Washer (M9.2)		
	11	5-A	07C82176F01	Assy., Handle Bracket		
	12	2-E	03C42723U04	Screw, Cup (M2.6 × 8)		
	13		03S44205G07	Screw, Pan (M2.6 × 5)		
	14		03S44205G48	Screw, Pan (M2.6 × 5)		
	15	4-A	02S40000G20	Nut (M9)		
	17	5-B	36B94116F02	Knob, Slide		
	18	2-D	30T92773F01	FFC, 16P		
	20	5-G	03S40011G84	Screw, Countersink (M2.6 × 6)		
	21		03S44205G33	Screw, Pan (M2.6 × 8)		
	23	3-E	15A84078F01	Case, Battery		
	24		03S44205G34	Screw, Pan (M2.6 × 5)		
	26	4-B	30T82417F01	Flat Cable (12P)		
	27	5-D	01T94579F01	Flat Wire (5P)		
	29	4-C	15B94117F01	Case, LCD		
	30	4-C	61A94118F01	Lens, LCD		
	31	4-B	26A94119F01	Reflector, Sheet		
	32		14S94461F16	Insulator, Cover		
	33	4-B	07A94609F01	Bracket, Shield		
	34	4-B	14S81482F90	Insulator, Cover		
	41	5-D	01T94579F02	Flat Wire (9P)		
	42	5-D	01T94579F03	Flat Wire (25P)		
	45	3-E	37T43734F03	Sumi Tube		

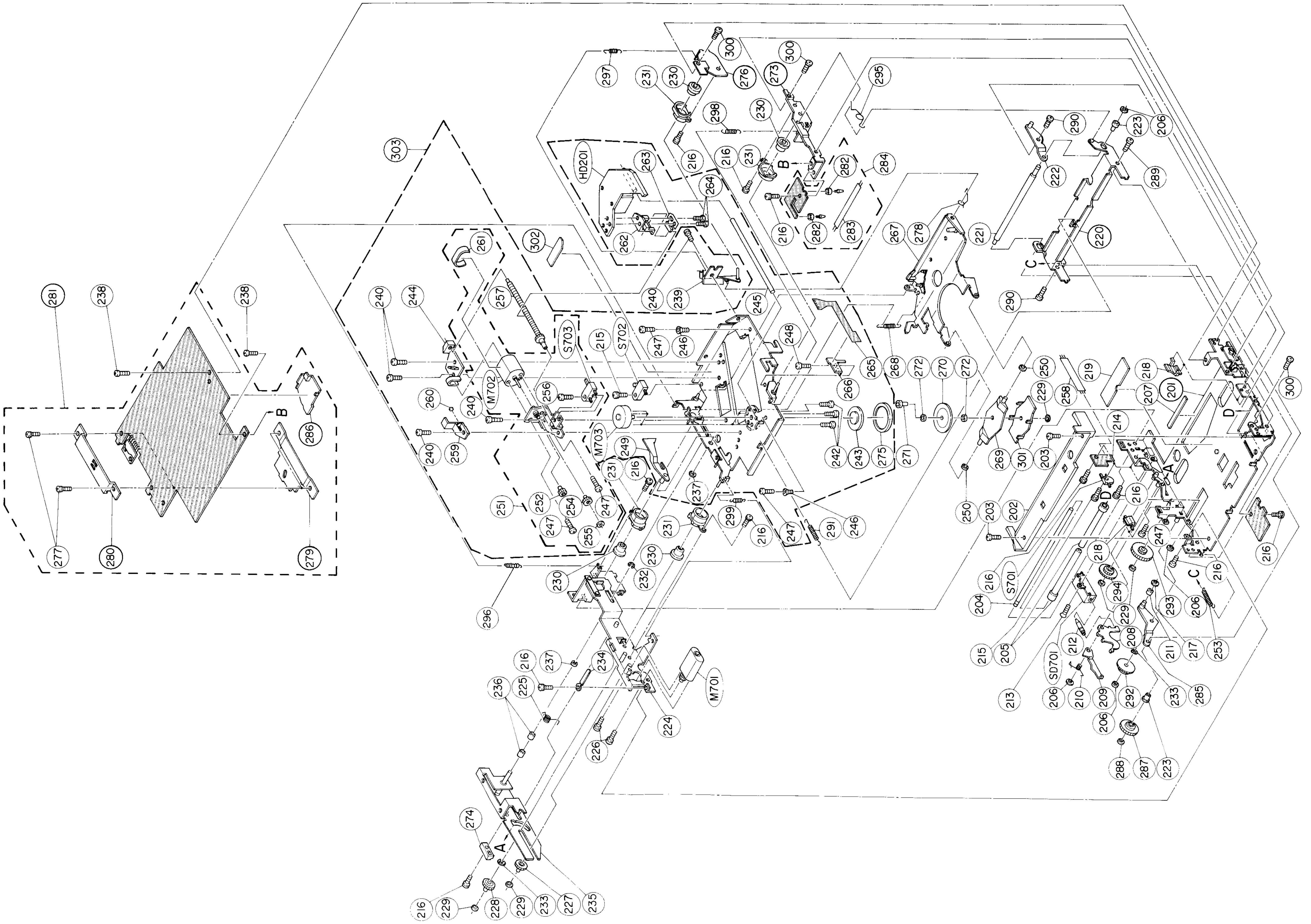
Symbol No.	Index	Part No.	Description		

Notes : ● : For North American model only (AO), ▲ : For European model only (EO), Others : Common.

Exploded View (Cabinet)


24
1
C
A
A
13
A
A
39
C
24
37
12
4
A
13
A
43
18
36
13
40
38
13
E802
21
13
6
13
10
BA801
23
45
44
25
28
D
22
26
34
33
32
LCD401
15
29
35
30
31
32
14
21
14
5
19
A
A
13
20
13
7
17
9
8
D
42
41
27
D
13
24
3
C
11
C
24
16
13
2

Exploded View (CD Mechanism)


281
238
238
B
286
277
280
279
303
297
231
230
300
276
273
300
295
298
230
216
216
231
B
282
284
290
223
206
289
222
HD201
263
264
262
282
283
216
267
278
221
220
C
290
261
302
240
239
245
240
244
257
S703
215
S702
247
246
248
265
268
272
270
272
250
219
218
201
207
D
300
260
240
M702
256
266
229
258
214
240
259
M703
249
231
216
237
242
243
275
271
269
301
203
A
D
216
251
252
254
247
247
255
231
230
299
216
247
291
246
250
203
202
216
230
232
296
218
247
C
216
294
229
293
206
216
S701
204
215
205
212
208
211
217
253
216
237
234
236
225
M701
224
226
213
SD701
206
210
209
292
233
285
206
288
287
223
274
A
216
229
228
229
233
227
235

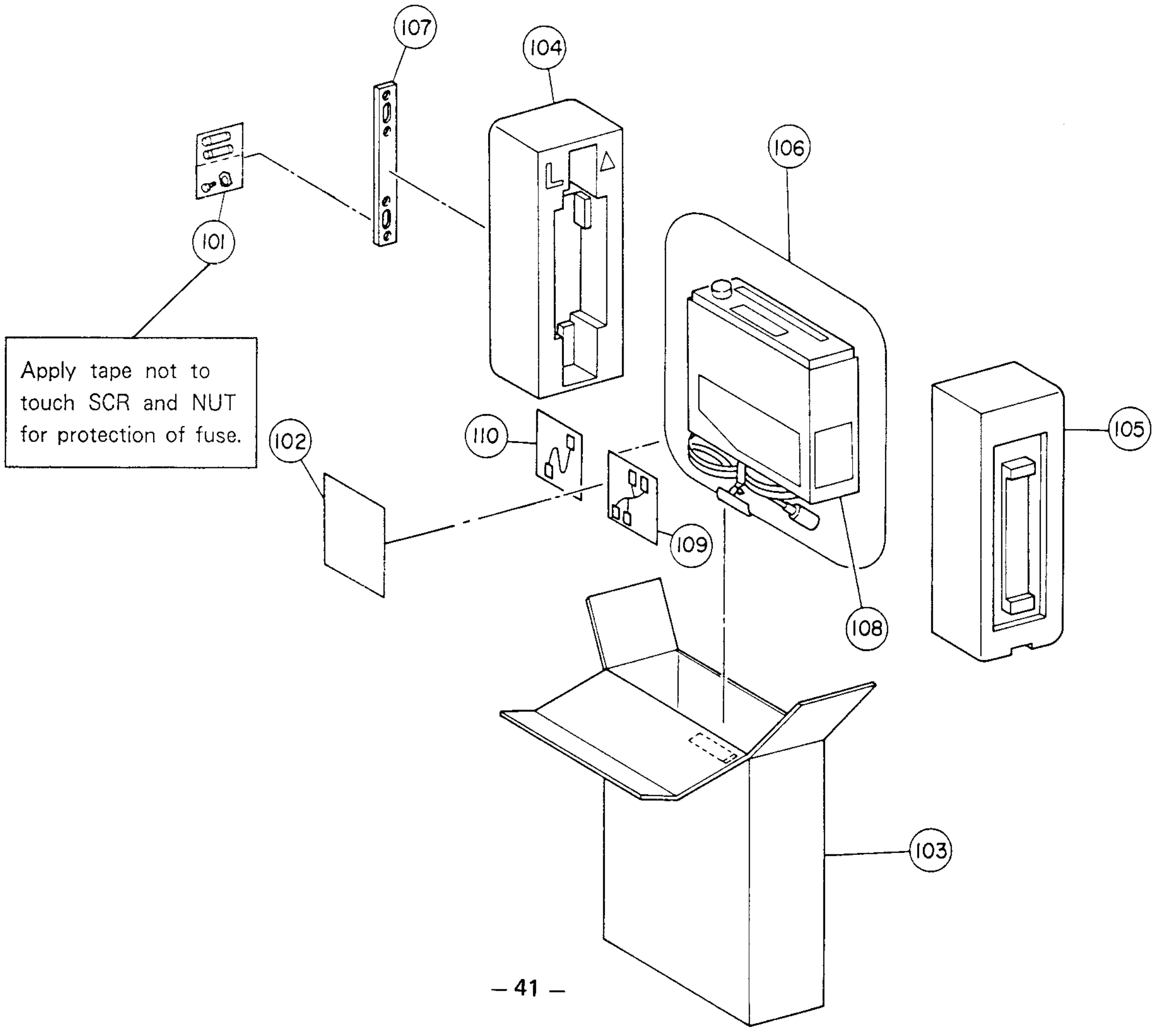
Packing Assembly Parts List

Symbol No.	Part No.	Description		
101	01V94900F44	Assy., Kit		
▲ 101-1	02B47353F01	Nut, Hex (M5)		
▲ 101-2	03S40012G66	Screw, Topping (M5×20)		
▲ 101-3	03B44963F03	Bolt, Hex W/Washer (M5×10)		
▲ 101-4	46A42363F01	Stud, Bolt		
▲ 101-5	03A40155F01	Bolt, Hex (M5×8)		
▲ 101-6	65A40348G04	Fuse, 3A (For ACC Battery Line)		
▲ 101-7	03A84814F04	Screw, Bind (M2.6×8)		
▲ 101-8	43A58272F03	Spacer		
● 102	01V94500F15	Assy., Pamphlet		
▲ 102	68P93881F49	Owners Manual		
103	56S90024F80	Carton, Packing (Individual)		
104	56D82187F01	Tray, Packing (L)		
105	56D82187F02	Tray, Packing (R)		
106	56B40990T36	Sack, Polyethylene		

Symbol No.	Part No.	Description		
107	07B64552F01	Bracket, Strap Receiver		
108	01V94500F15	Assy., Mother Case (Included Assembly Connector QRB (PLUG) [E801])		
▲ 108-1	01T94603F04	Assy., Connector QRB (PLUG) [E801]		
▲ 108-2	15D94518F01	Case, Motor		
▲ 108-3	03S44205G33	Screw, Pan (M2.6×8)		
109	01T96094F01	Assy., RCA600		
110	01T96095F01	Assy., Connector (4P)		

Notes : ● : For North American model only (AO), ▲ : For European model only (EO), Others : Common.

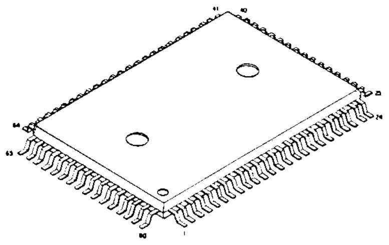
Packing Method View

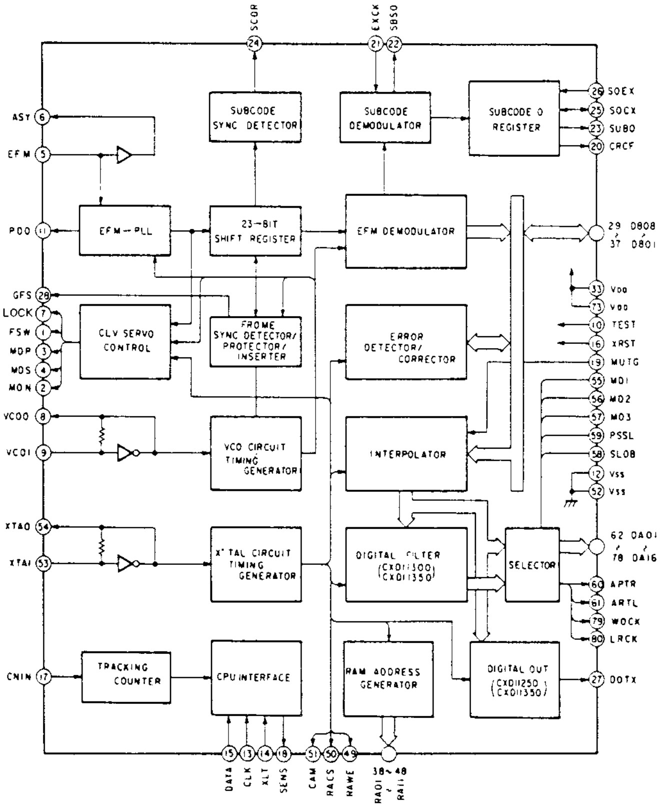


Apply tape not to touch SCR and NUT for protection of fuse.

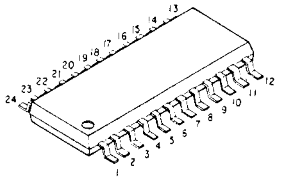
Semi-Conductor Lead Identifications

CXD1135Q : IC11


41
40
25
24
64
65
80
1


SCOR
EXCK
SBSO
24
21
22
SUBCODE SYNC DETECTOR
SUBCODE DEMODULATOR
SUBCODE Q REGISTER
26 SQEX
25 SQCK
23 SUBQ
20 CRCF
AST 6
EFM 5
PDO 11
EFM-PLL
23-BIT SHIFT REGISTER
EFM DEMODULATOR
29~37 DB08~DB01
33 VDD
73 VDD
10 TEST
16 XRST
19 MUTG
55 MD1
56 MD2
57 MD3
59 PSSL
58 SLOB
12 VSS
52 VSS
GFS 28
LOCK 7
FSW 1
MDP 3
MDS 4
MON 2
CLV SERVO CONTROL
FRAME SYNC DETECTOR/ PROTECTOR/ INSERTER
ERROR DETECTOR/ CORRECTOR
VCOO 8
VCOI 9
VCO CIRCUIT TIMING GENERATOR
INTERPOLATOR
XTAO 54
XTAI 53
X'TAL CIRCUIT TIMING GENERATOR
DIGITAL FILTER (CXD1130Q) (CXD1135Q)
SELECTOR
62~78 DA01~DA16
60 APTR
61 APTL
79 WDCK
80 LRCK
CNIN 17
TRACKING COUNTER
CPU INTERFACE
RAM ADDRESS GENERATOR
DIGITAL OUT (CXD1125Q) (CXD1135Q)
27 DOTX
15 DATA
13 CLK
14 XLT
18 SENS
51 CAM
50 RACS
49 RAWE
38~48 RA01~RA11

CXK5816M : IC12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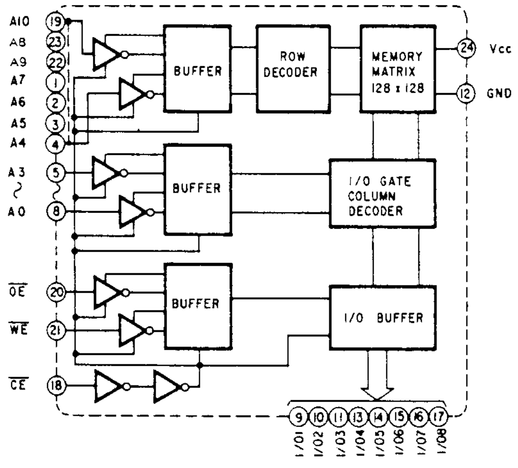
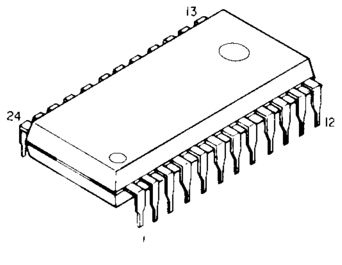
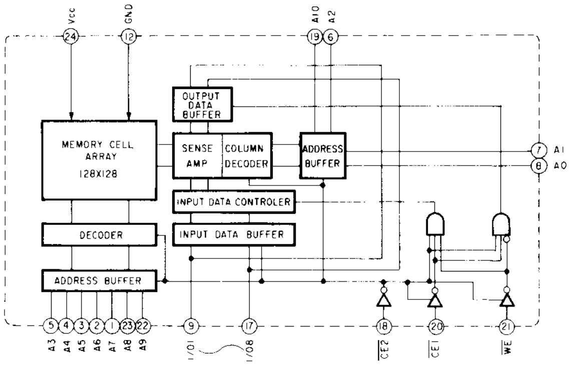
24

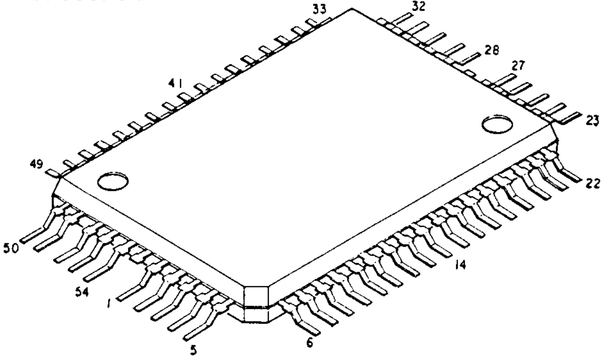

A10 19
A8 23
A9 22
A7 1
A6 2
A5 3
A4 4
A3 5
~
A0 8
BUFFER
ROW DECODER
MEMORY MATRIX 128 x 128
24 Vcc
12 GND
BUFFER
I/O GATE COLUMN DECODER
OE 20
WE 21
CE 18
BUFFER
I/O BUFFER
9 10 11 13 14 15 16 17
I/O1 I/O2 I/O3 I/O4 I/O5 I/O6 I/O7 I/O8

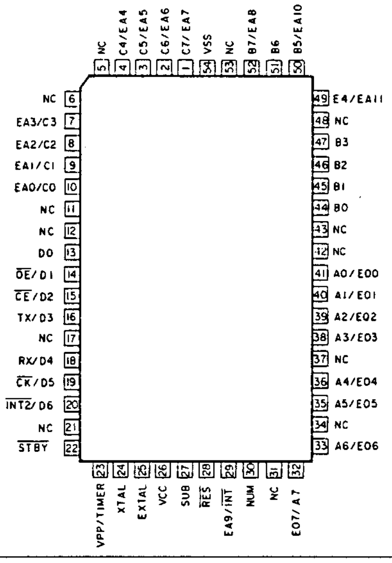
LC3516AML-15 : IC12



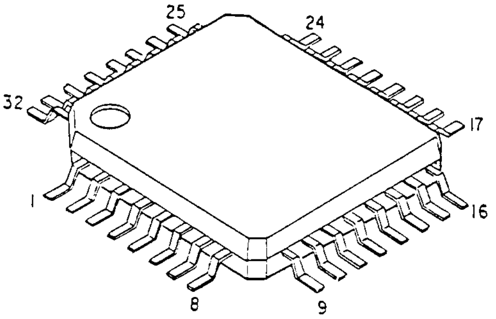

Vcc 24
GND 12
A10 19
A2 6
OUTPUT DATA BUFFER
MEMORY CELL ARRAY 128X128
SENSE AMP
COLUMN DECODER
ADDRESS BUFFER
7 A1
8 A0
INPUT DATA CONTROLER
DECODER
INPUT DATA BUFFER
ADDRESS BUFFER
5 4 3 2 1 23 22
A3 A4 A5 A6 A7 A8 A9
9 I/O1
17 I/O8
18 CE2
20 CE1
21 WE

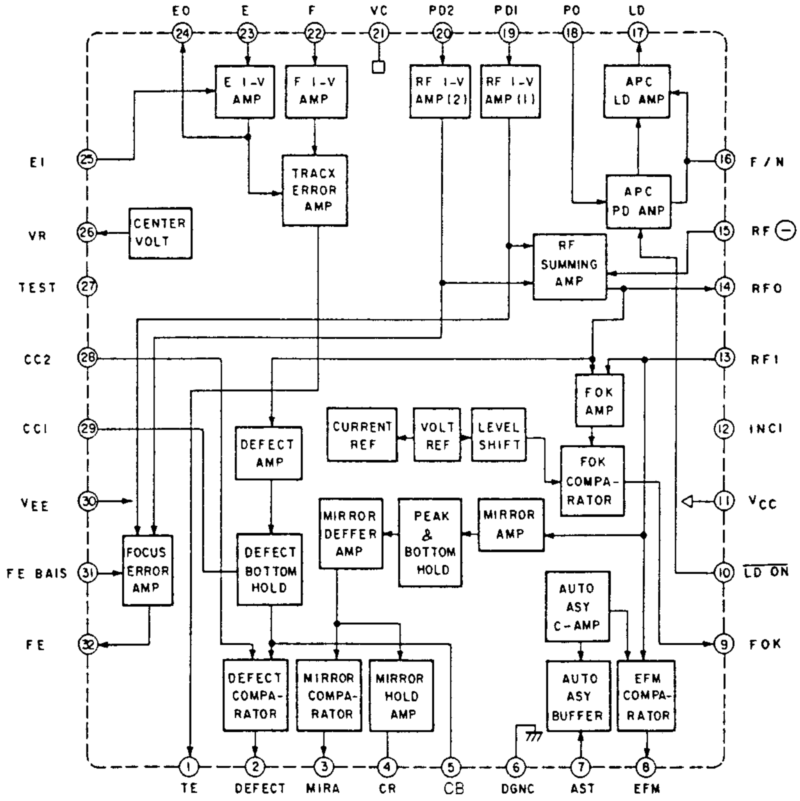
90390F02
92369F04 : IC13


33
32
28
27
41
23
49
22
50
14
54
1
5
6

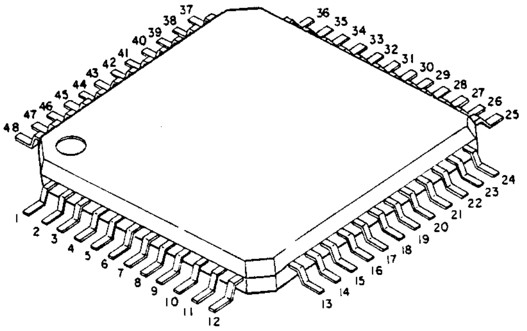

5 NC
4 C4/EA4
3 C5/EA5
2 C6/EA6
1 C7/EA7
54 VSS
53 NC
52 B7/EA8
51 B6
50 B5/EA10
6 NC
7 EA3/C3
8 EA2/C2
9 EA1/C1
10 EA0/C0
11 NC
12 NC
13 D0
14 $\overline{OE}$/D1
15 $\overline{CE}$/D2
16 TX/D3
17 NC
18 RX/D4
19 $\overline{CK}$/D5
20 $\overline{INT2}$/D6
21 NC
22 $\overline{STBY}$
49 E4/EA11
48 NC
47 B3
46 B2
45 B1
44 B0
43 NC
42 NC
41 A0/E00
40 A1/E01
39 A2/E02
38 A3/E03
37 NC
36 A4/E04
35 A5/E05
34 NC
33 A6/E06
23 VPP/TIMER
24 XTAL
25 EXTAL
26 VCC
27 SUB
28 $\overline{RES}$
29 EA9/$\overline{INT}$
30 NUM
31 NC
32 E07/A7

CXA1081Q : IC14


25
24
32
17
1
16
8
9


EO
E
F
VC
PD2
PD1
PO
LD
24
23
22
21
20
19
18
17
E I-V AMP
F I-V AMP
RF I-V AMP(2)
RF I-V AMP(1)
APC LD AMP
EI 25
TRACX ERROR AMP
16 F/N
APC PD AMP
VR 26
CENTER VOLT
RF SUMMING AMP
15 RF ⊖
TEST 27
14 RFO
CC2 28
13 RF1
FOK AMP
CC1 29
CURRENT REF
VOLT REF
LEVEL SHIFT
DEFECT AMP
12 INC1
FOK COMPA-RATOR
VEE 30
11 VCC
MIRROR DEFFER AMP
PEAK & BOTTOM HOLD
MIRROR AMP
FE BAIS 31
FOCUS ERROR AMP
DEFECT BOTTOM HOLD
10 $\overline{LD\ ON}$
AUTO ASY C-AMP
FE 32
9 FOK
DEFECT COMPA-RATOR
MIRROR COMPA-RATOR
MIRROR HOLD AMP
AUTO ASY BUFFER
EFM COMPA-RATOR
1 TE
2 DEFECT
3 MIRA
4 CR
5 CB
6 DGNC
7 AST
8 EFM

CXA1082AQ : IC15



1
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35
36
37
38
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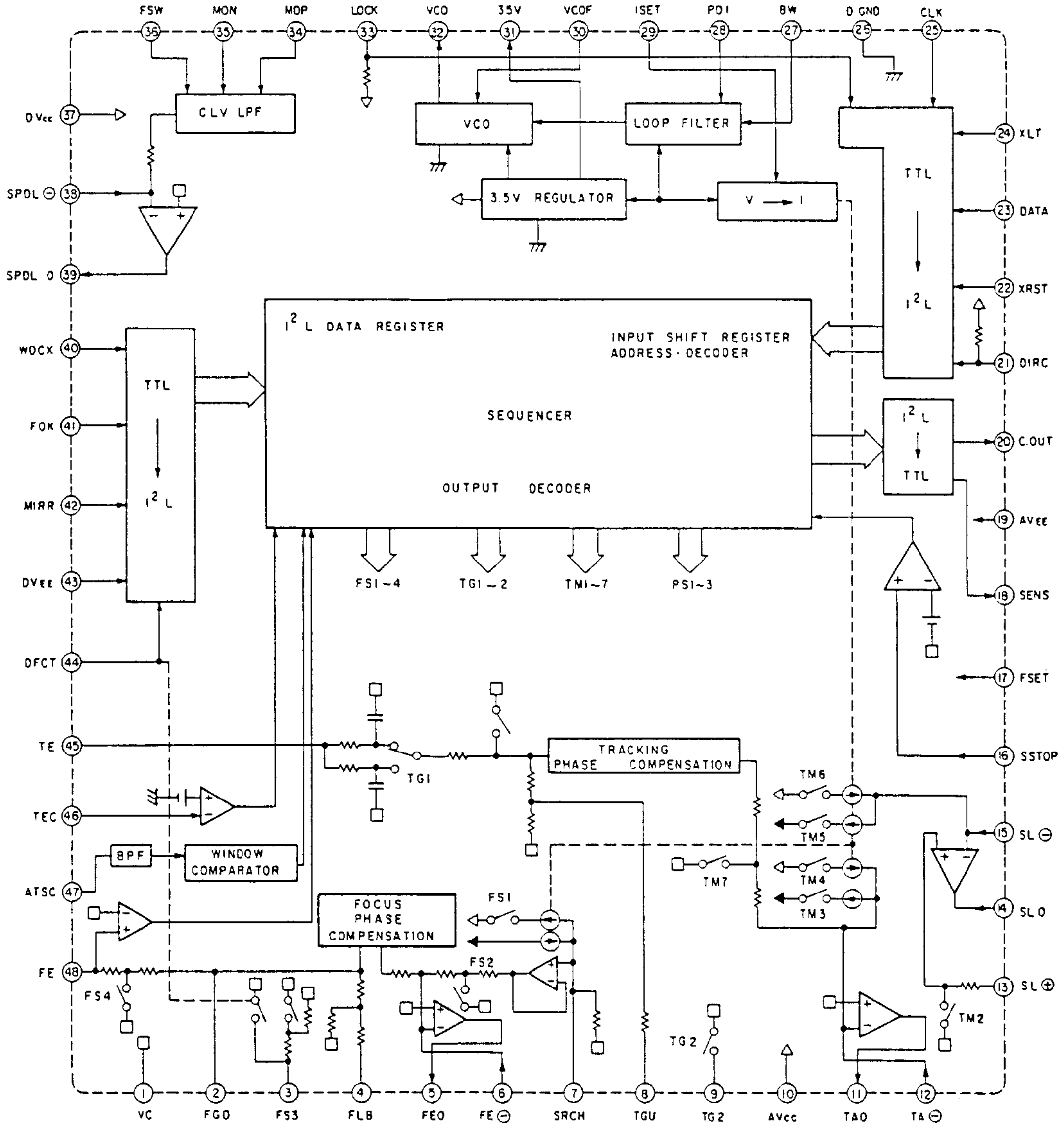
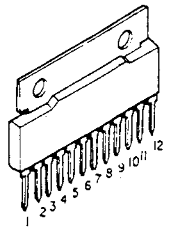
41
42
43
44
45
46
47
48



FSW 36
MON 35
MOP 34
LOCK 33
VCO 32
3.5V 31
VCOF 30
ISET 29
PDI 28
BW 27
D GND 26
CLK 25
CLV LPF
VCO
LOOP FILTER
3.5V REGULATOR
V → I
TTL ↓ I²L
DVcc 37
SPDL ⊖ 38
SPDL O 39
WDCK 40
FOK 41
MIRR 42
DVEE 43
DFCT 44
TE 45
TEC 46
ATSC 47
FE 48
24 XLT
23 DATA
22 XRST
21 DIRC
20 C.OUT
19 AVEE
18 SENS
17 FSET
16 SSTOP
15 SL ⊖
14 SL O
13 SL ⊕
TTL ↓ I²L
I² L DATA REGISTER
INPUT SHIFT REGISTER
ADDRESS · DECODER
SEQUENCER
OUTPUT DECODER
I²L ↓ TTL
FS1 ~ 4
TG1 ~ 2
TM1 ~ 7
PS1 ~ 3
TG1
TRACKING PHASE COMPENSATION
TM6
TM5
TM7
TM4
TM3
TM2
BPF
WINDOW COMPARATOR
FOCUS PHASE COMPENSATION
FS1
FS2
FS4
TG2
1 VC
2 FGD
3 FS3
4 FLB
5 FEO
6 FE ⊖
7 SRCH
8 TGU
9 TG2
10 AVcc
11 TAO
12 TA ⊖

BA6291 : IC17


1
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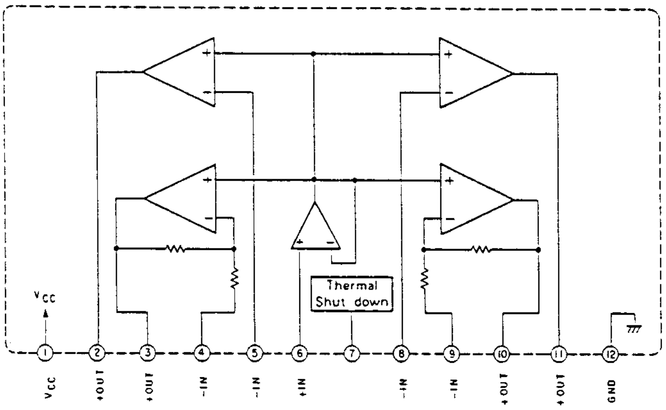
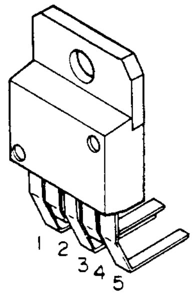
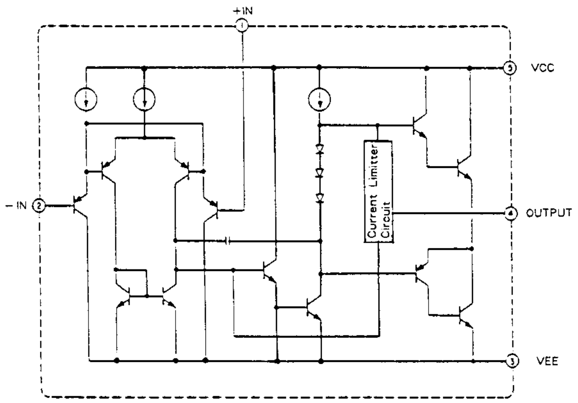
3
4
5
6
7
8
9
10
11
12


Thermal
Shut down
VCC
1
2
3
4
5
6
7
8
9
10
11
12
VCC
+OUT
+OUT
-IN
-IN
+IN
-IN
-IN
+OUT
+OUT
GND

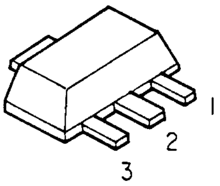
LA6501-LR : IC18



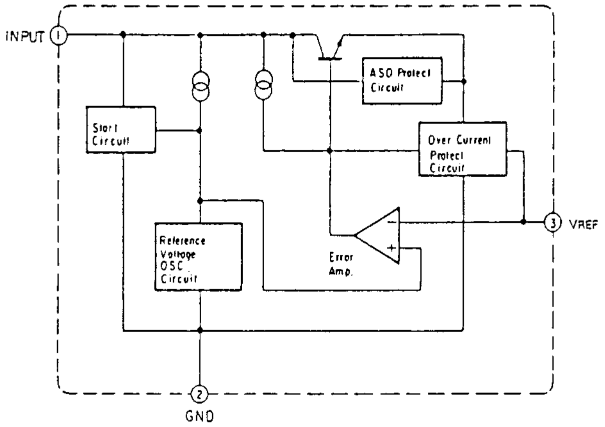
1. +IN
2. −IN
3. VEE
4. OUTPUT
5. VCC


+IN
1
5
VCC
−IN
2
Current Limitter Circuit
4
OUTPUT
3
VEE

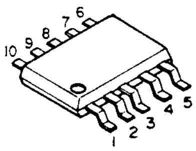
M5236ML : IC21

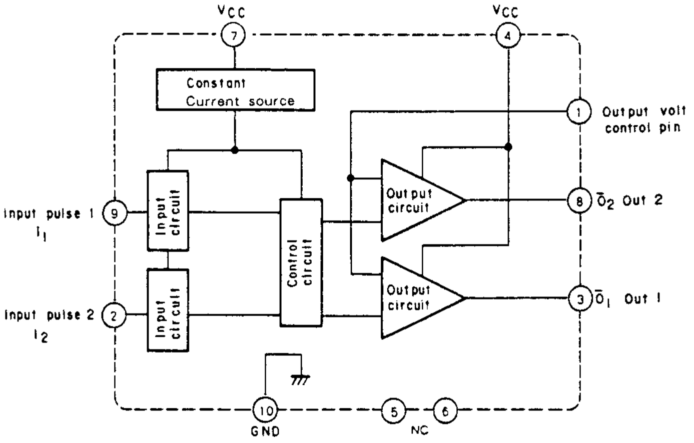


1 : INPUT
2 : GND
3 : V REF

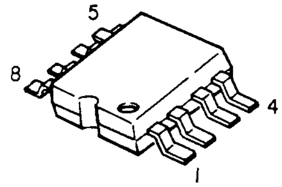

INPUT
1
ASO Protect
Circuit
Start
Circuit
Over Current
Protect
Circuit
Reference
Voltage
OSC
Circuit
Error
Amp.
3
VREF
2
GND

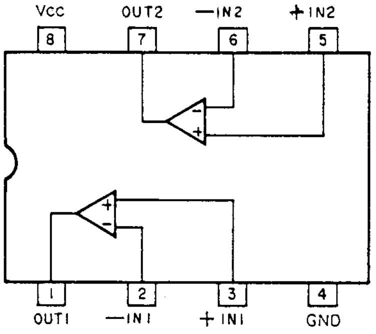
M54641FP : IC25


10
9
8
7
6
1
2
3
4
5

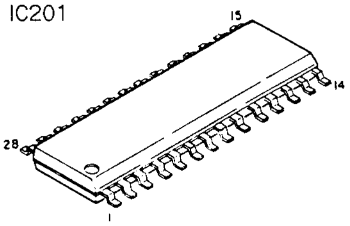

Vcc
7
Vcc
4
Constant
Current source
1
Output volt
control pin
Input pulse 1
I1
9
Input circuit
Control circuit
Output circuit
8
Ō2 Out 2
Input pulse 2
I2
2
Input circuit
Output circuit
3
Ō1 Out 1
10
GND
5
6
NC

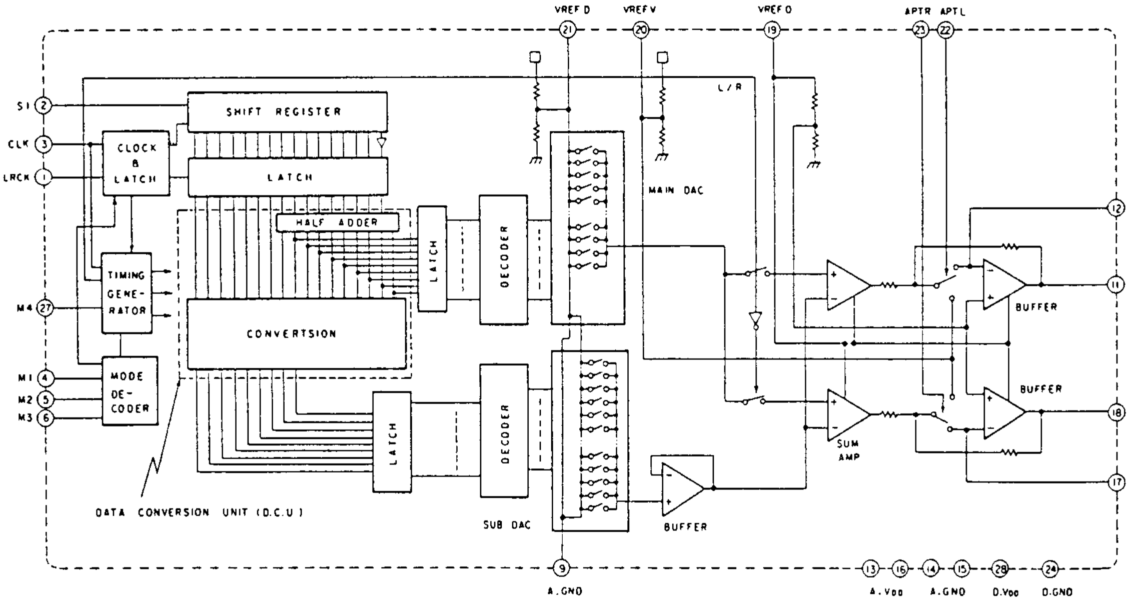
BA10358F ┐
NJM2904M ┘ : IC26



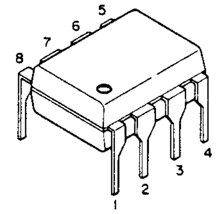

Vcc
OUT2
—IN2
+IN2
8
7
6
5
1
2
3
4
OUT1
—IN1
+IN1
GND

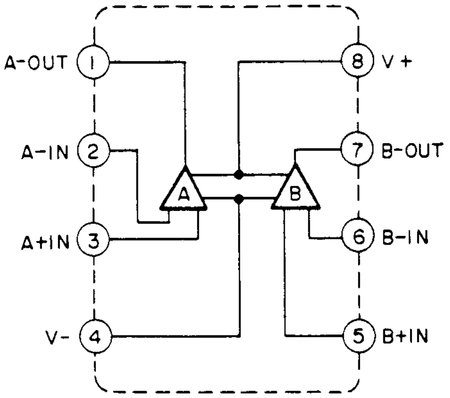
μ PD6355G : IC201



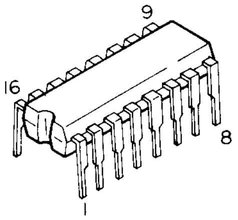

VREF D
VREF V
VREF O
APTR
APTL
21
20
19
23
22
SI 2
CLK 3
LRCK 1
M4 27
M1 4
M2 5
M3 6
SHIFT REGISTER
CLOCK & LATCH
LATCH
HALF ADDER
TIMING GENE-RATOR
CONVERTSION
MODE DE-CODER
LATCH
DECODER
LATCH
DECODER
MAIN DAC
SUB DAC
L/R
SUM AMP
BUFFER
BUFFER
BUFFER
DATA CONVERSION UNIT (D.C.U)
12 CHL
11 L OUT
18 R OUT
17 CHR
9
A.GND
13
16
14
15
28
24
A.VDD
A.GND
D.VDD
D.GND

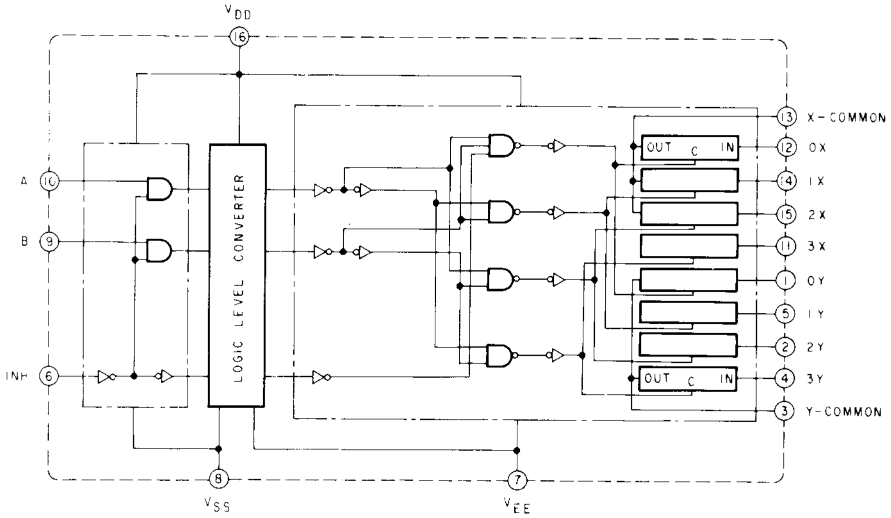
NJM4560D : IC202, 204, 206, 301, 303, 304



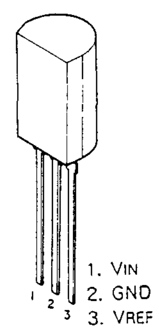

A-OUT 1
A-IN 2
A+IN 3
V- 4
8 V+
7 B-OUT
6 B-IN
5 B+IN
A
B

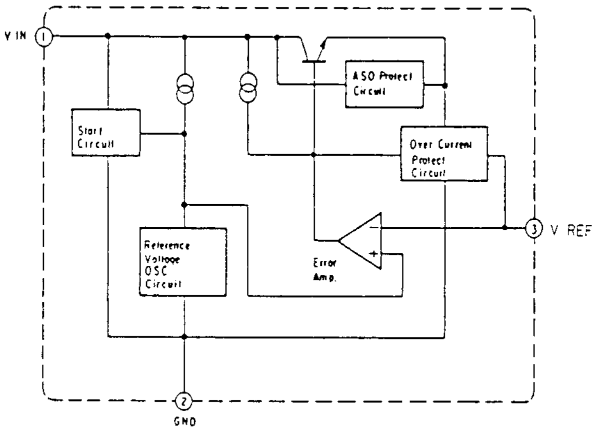
TC4052BP : IC203



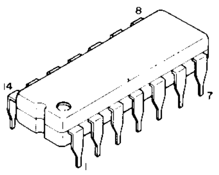

VDD
16
A 10
B 9
INH 6
LOGIC LEVEL CONVERTER
OUT C IN
13 X-COMMON
12 0X
14 1X
15 2X
11 3X
1 0Y
5 1Y
2 2Y
4 3Y
3 Y-COMMON
8
VSS
7
VEE

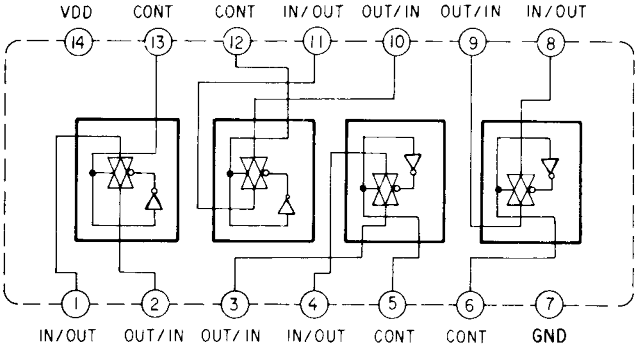
M5236L : IC205


1
2
3
1. VIN
2. GND
3. VREF


VIN 1
ASO Protect Circuit
Start Circuit
Over Current Protect Circuit
Reference Voltage OSC Circuit
Error Amp.
3 V REF
2
GND

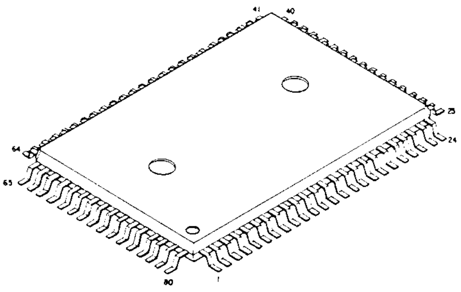
TC4066BP : IC302, 603

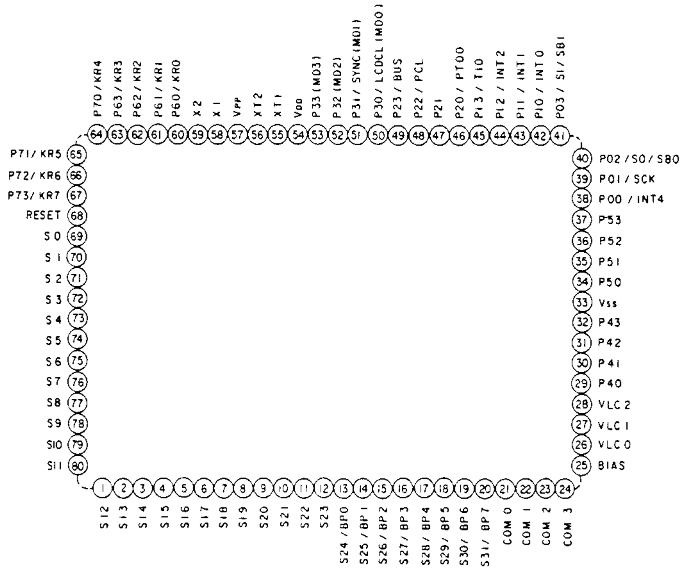



VDD
CONT
CONT
IN/OUT
OUT/IN
OUT/IN
IN/OUT
14
13
12
11
10
9
8
1
2
3
4
5
6
7
IN/OUT
OUT/IN
OUT/IN
IN/OUT
CONT
CONT
GND

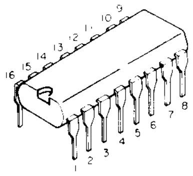
94530F02 : IC601 (AO model only)

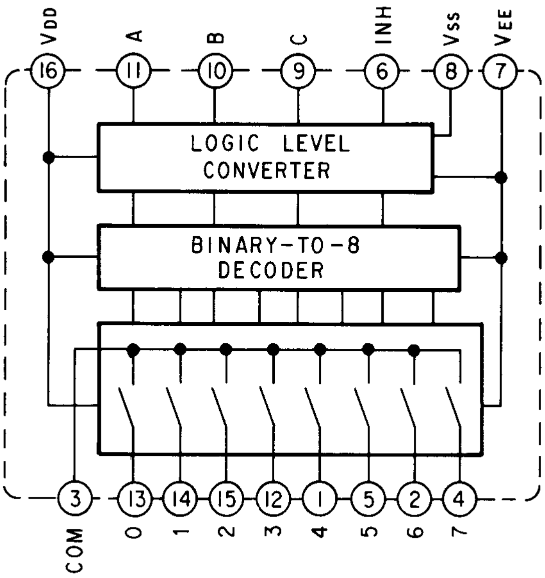
94530F04 : IC601 (EO model only)


41
40
25
24
64
65
80
1

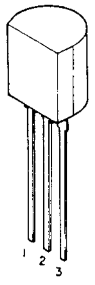

64 P70/KR4
63 P63/KR3
62 P62/KR2
61 P61/KR1
60 P60/KR0
59 X2
58 X1
57 VPP
56 XT2
55 XT1
54 VDD
53 P33(MD3)
52 P32(MD2)
51 P31/SYNC(MD1)
50 P30/LCDCL(MD0)
49 P23/BUS
48 P22/PCL
47 P21
46 P20/PT00
45 P13/TI0
44 P12/INT2
43 P11/INT1
42 P10/INT0
41 P03/SI/SB1
65 P71/KR5
66 P72/KR6
67 P73/KR7
68 RESET
69 S0
70 S1
71 S2
72 S3
73 S4
74 S5
75 S6
76 S7
77 S8
78 S9
79 S10
80 S11
40 P02/SO/SB0
39 P01/SCK
38 P00/INT4
37 P53
36 P52
35 P51
34 P50
33 Vss
32 P43
31 P42
30 P41
29 P40
28 VLC2
27 VLC1
26 VLC0
25 BIAS
1 S12
2 S13
3 S14
4 S15
5 S16
6 S17
7 S18
8 S19
9 S20
10 S21
11 S22
12 S23
13 S24/BP0
14 S25/BP1
15 S26/BP2
16 S27/BP3
17 S28/BP4
18 S29/BP5
19 S30/BP6
20 S31/BP7
21 COM0
22 COM1
23 COM2
24 COM3

TC4051BP : IC602

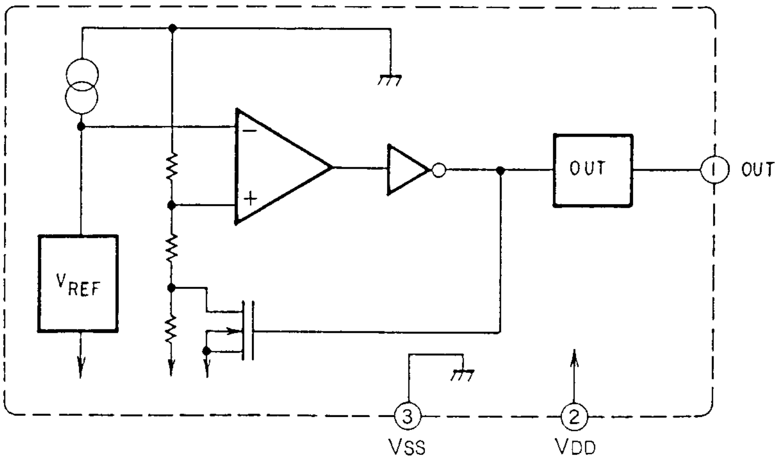

16
15
14
13
12
11
10
9
1
2
3
4
5
6
7
8


VDD
A
B
C
INH
Vss
VEE
16
11
10
9
6
8
7
LOGIC LEVEL CONVERTER
BINARY-TO-8 DECODER
3
13
14
15
12
1
5
2
4
COM
0
1
2
3
4
5
6
7

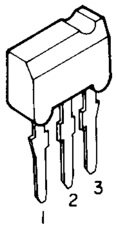
S-8052ALR : IC604

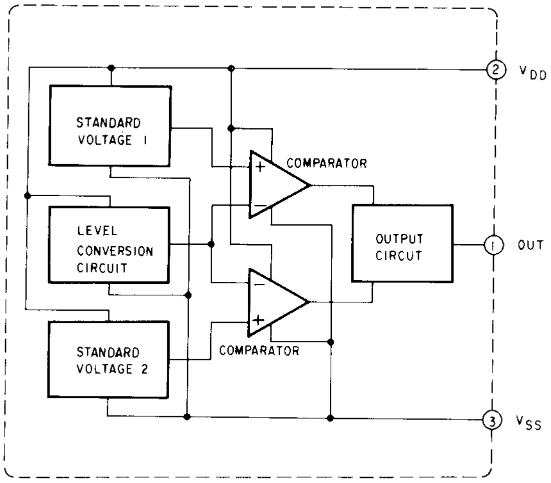


1. OUT
2. VDD
3. VSS

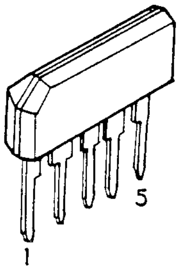

-
+
OUT
1
OUT
VREF
3
2
VSS
VDD

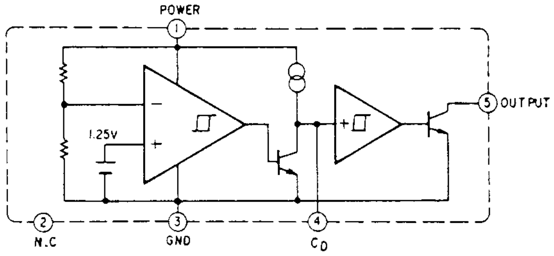
MN1280 : IC605



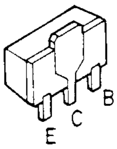

STANDARD VOLTAGE 1
LEVEL CONVERSION CIRCUIT
STANDARD VOLTAGE 2
COMPARATOR
COMPARATOR
OUTPUT CIRCUT
2 VDD
1 OUT
3 VSS

M51953BL : IC801

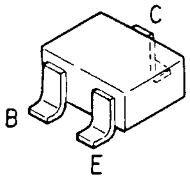


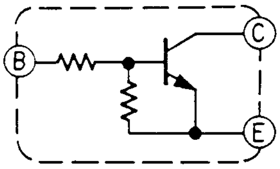

POWER
1
1.25V
5 OUTPUT
2 N.C
3 GND
4 CD

2SB1073 : Q11
2SB1188 : Q19, 33
2SD1766 : Q32

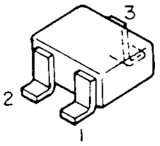


DTC124K : Q12, 18, 24, 28, 31

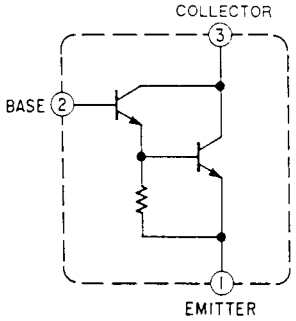




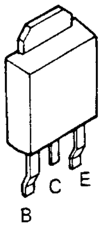
2SD1383K : Q13



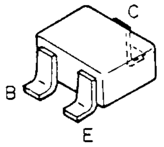
(1) EMITTER
(2) BASE
(3) COLLECTOR

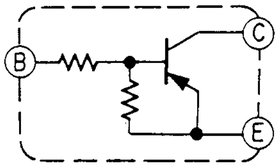

COLLECTOR
3
BASE 2
1
EMITTER

2SD1760 : Q16

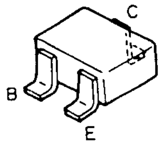


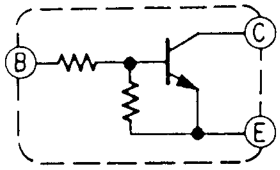
DTA124K : Q17, 27, 30
DTA124EU : Q805
DTA114EU : Q807



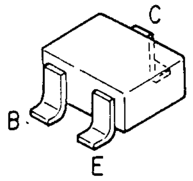


DTC144K : Q21, 29
DTC124EU : Q203, 806, 808, 810, 811, 812

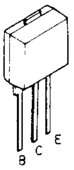




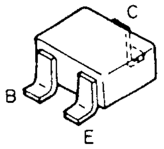
2SC2412K : Q22
2SA1576 : Q601, 809

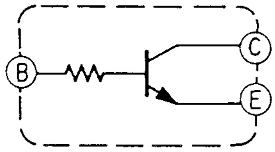


2SB1172A : Q25
2SD1742 : Q26

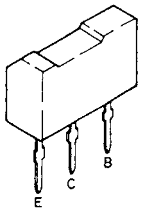


DTC114TU : Q201, 202, 602

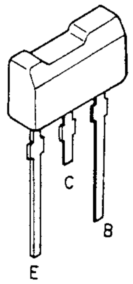




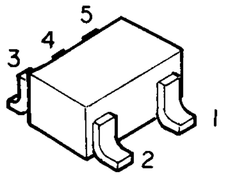
2SB911M: Q205, 825



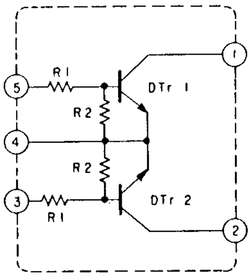
2SD1991 : Q206
2SD1992 : Q803, 804



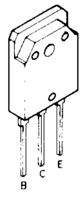
FMG1 : Q301, 603, 820



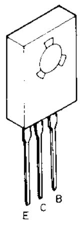
1. Collector
2. Collector
3. Base
4. Emitter
5. Base


R1
R2
R2
R1
DTr 1
DTr 2
1
2
3
4
5

2SD1330 : Q307, 308, 309, 310



2SD1189 : Q814



2SB644 : Q819